



EMC manual

Events module

Siemens Switzerland Ltd
Industry Sector
Building Technologies Division
Gubelstrasse 22
6301 Zug
Switzerland
Tel. +41 41-724 24 24
www.siemens.com/sbt

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Contents

1	Documentation Overview	5
1.1	Change History	5
1.2	Before you start.....	5
1.2.1	Copyright.....	5
1.2.2	Quality assurance	5
1.2.3	Document Use / Request to read.....	5
2	Introduction	6
2.1	Possible applications	6
2.2	Architecture	6
2.2.1	Building management system.....	7
2.2.2	Transfer	7
2.2.3	EMC	7
2.3	Installation	7
3	Operation	8
3.1	Layout and elements.....	8
3.1.1	Workspace	9
3.1.2	Functions.....	9
3.1.3	Alarm information.....	10
3.1.4	Event cards	10
3.2	User rights.....	11
3.3	Adapting views.....	11
3.3.1	Standard views.....	11
3.3.2	User-defined views	12
4	Processing alarms	13
4.1	General settings.....	13
4.2	Details	13
4.3	Description	13
4.4	To do	14
4.5	Comments.....	14
4.6	Overview	14
4.7	History	14
5	Reports.....	15

1 Documentation overview

1.1 Change history

Version	Date	Changes	Chapter	Pages
1	03.08.2009	New document	—	—

1.2 Before you start

1.2.1 Copyright

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2 Introduction

2.1 Possible applications

Along with energy consumption and other process variables, alarms are an integral part of modern energy and operational optimization measures.

The Events module in EMC enables fast and efficient responses to problems arising in customer systems. An interactive, dynamic user interface provides a quick overview of all connected customer systems.

Besides presenting alarms in a clear overview, they can be analyzed and provided with additional information.

Moreover, alarms can also be analyzed jointly with other variables at the same time.

2.2 Architecture

The Events module is closely connected with the alarm function of the building management systems. It logs alarms for subsequent presentation in a standardized format in EMC. This enables alarms from different systems to be uniformly presented in EMC.

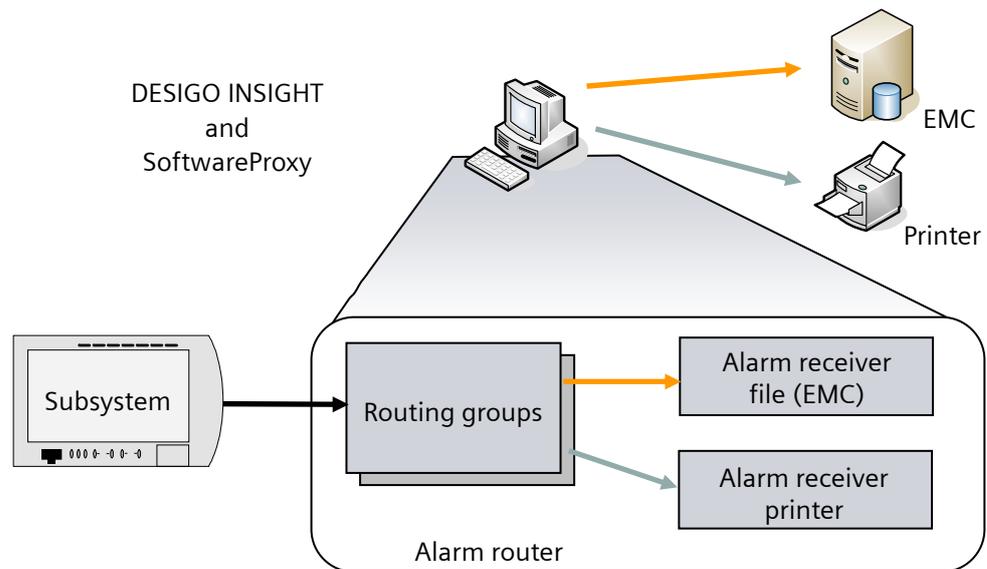


Figure 1: Principle using DESIGO INSIGHT as an example

The architecture comprises three main levels.

2.2.1 Building management system

The building management system produces alarm messages based on a variety of criteria.

Configuration is therefore required to specify what alarms are forwarded to EMC. The configuration takes place in different ways; the Alarm Router is provided in DESIGO INSIGHT for this purpose.

2.2.2 Transfer

Like all other information, alarms are transferred by the software proxy to EMC.

The software proxy provides a configurable interface that can be adapted to a range of different systems. Sample configurations are available in Swanweb: <https://intranet.sbt.siemens.com/swanlink/default.php?tabcard=4b73a4b5&src=emc/Integrations>.

The software proxy also provides special functions for sending alarms. For example, it interrupts active transmissions of energy data if an alarm has to be transferred (by means of priority assignment).

Detailed instructions on taking the software proxy into operation are provided on Swanweb.

2.2.3 EMC

The Events module grants direct access to all alarms that are available in EMC. These alarms can be displayed and further processed. It is also possible to output alarms in reports and in the Analysis module.

Unlike energy counters, events are automatically created in EMC.

EMC presents alarms from different systems, but does not return any data (for example, additional information). In other words, the communication is one-way.

This documentation refers to this area, namely the Events module.

2.3 Installation

The Events module is automatically available to all authorized EMC users. The Adobe Flash Player (from Version 9) is required for use of the module.

Reports for analysis of alarms can be assigned to customers and users as required.

3 Operation

3.1 Layout and elements

The Events module has a dynamic user interface. Its features include automatic refreshing following new information ("push" technology) and dynamic adaptation to the user's screen resolution.

The screenshot shows the Siemens Events module interface. At the top, there is a navigation bar with tabs for Monitoring & Control, ActivityLog, EventLog, and Analyze. The user is logged in as Maier, Alexander. The main area displays a table of alarms for 'Room Temperature'. The table has columns for Alarm Point Name, Alarm status, Datasource, Node, Device User, Owner, and Priority. Two alarms are listed: 'Anlageteil-Aus Zentrale 14' and 'Room Temperature'. The 'Room Temperature' alarm is selected. Below the table, there is a details pane for the selected alarm, showing fields like Alarm message, Alarm Condition, Alarm Limit, Alarm count, Comment, Last Update, Date received, and Device User. On the left side, there is a sidebar with 'Save view' and 'Standard views' sections. At the bottom left, there is a 'Connection monitor' section. Callouts 1-6 point to specific elements: 1. Grid with alarms and filters (the table), 2. Selected alarm (the 'Room Temperature' row), 3. Alarm details (the details pane), 4. Functions (the toolbar above the table), 5. Alarm cards (the 'Connection monitor' section), and 6. Views (the 'Save view' and 'Standard views' sections).

Alarm Point Name	Alarm status	Datasource	Node	Device User	Owner	Priority
Anlageteil-Aus Zentrale 14	Alarm unacknowledged	GUB:GUB'dd161'DI'DI 23	Feldstrasse 1a	Vcent1	Maier, Alexander (Operator)	Medium
Room Temperature	Alarm unacknowledged	BPOVC:BPO'Spirit3'RoomTemp	Visitor Center	Vcent1	Maier, Alexander (Operator)	Medium

Alarm message: Monitoring of Visitor Center \Spirit 2 Monitoring \Room Temperature
Alarm Condition:
Alarm Limit: 24.0
Value: 24.0
Alarm count: 0
Comment: BPO Monitoring:BPO Monitor'Room Temperature
Last Update: 07/11/09 12:04 PM
Date received: 07/11/09 12:02 PM
Device User: Vcent1

1. Workspace

All alarms that match the current filter settings are displayed here.

2. Selected alarm

An alarm can be selected with a mouse click.

Single mouse click: Select

Doubleclick: Edit

3. Details

Details are displayed in this area (read-only).

4. Functions

Depending on the state of an alarm and the rights of the user, different functions can be performed. Functions that are not available for use are displayed as disabled.

5. Alarm cards

New alarms are displayed in this area regardless of the filter settings in the workspace.

6. Views

Area for editing and applying views.

3.1.1 Workspace

The **workspace** provides a tabular view of the existing alarms. The view can be quickly reduced to a subset of variables using the filters provided on the title bar. By clicking with the mouse on a header, the table can be sorted in ascending or descending order according to the column selected.

The **column width** can be changed by dragging its borders. The order of the columns can be adapted to the user's requirements per drag & drop in the overview. An entry is selected with a single mouseclick. Multiselection is possible by selecting while holding down the Ctrl key at the same time. Doubleclicking on an entry opens the "Edit Event" dialog.

The events are marked in color according to their **priority** as follows.

	Critical
	High
	Medium
	Low

Filters offer the possibility to design the presentation of the alarms in a clear layout and to also group them for editing.

Filter settings are activated with a mouse click on a column header (checkbox).

Depending on the data type of the selected column, one of the following four filter types is displayed:

- **Tree structure**
Used to select a value from the hierarchically organised EMC node structure.
- **Calendar**
Used to select a date.
- **Selection list**
For a permanently defined set of values.
- **Free text**
Unrestricted input of a search term (including wildcards).

The filter is enabled by clicking the checkbox (or disabled if already enabled). Clicking outside the filter window closes the window. The filter settings for presentation of the data set are accepted in this way.

3.1.2 Functions

The buttons in the upper right section provide fast access to functions. The availability of functions depends on the selection or properties of a chosen alarm. If more than one alarm is selected, the functions affect the entire selection. The "Edit" function is an exception here – it is disabled in the case of multiselections.

The functions are described separately below (in the table on the following page).

Function	Description	Remarks
Acknowledge	The alarm is marked in EMC as acknowledged.	Applies only to alarms that have been correspondingly configured in EMC (requires acknowledgement).
Watch	The alarm is added to the "Watched by me" view.	Alarms can be monitored ("watched") by different users at the same time.
No longer watch	The alarm is removed from the "Watched by me" view.	—
Accept	The current user is entered as the owner and is therefore responsible for acknowledging and closing the alarm.	Events that have an owner are no longer displayed as alarm cards to other users.
Enable	The owner of the alarm is removed. Another user can accept the alarm.	—
Edit	All properties of the alarm that are not write-protected can be changed.	See 4 – Processing alarms
Delete	The result and all associated information (e.g., remarks) are deleted.	Events can only be deleted by their owner.

3.1.3 Alarm information

The lower section of the screen provides detailed information on the selected alarm. This section is also found in the "Edit result" dialog and offers additional input options at this point.

3.1.4 Event cards

Incoming events are placed on the event card stack. The stack is immediately visible to all users regardless of the setting of the filter criteria. The number in the title area indicates the number of received alarms. The event card shows the most important information and is colored according to priority.

The lower area contains the button bar for direct handling of an event. The functions are as shown below.

Function	Description	Remarks
Acknowledge	The alarm is marked in EMC as acknowledged.	Applies only to alarms that have been correspondingly configured in EMC (requires acknowledgement).
Watch	The alarm is added to the "Watched by me" view.	Alarms can be monitored ("watched") by different users.
Accept	The current user is entered as the owner and is therefore responsible for acknowledging and closing the alarm.	Events that have an owner are no longer displayed as alarm cards to other users.
Edit	All properties of the alarm that are not write-protected can be changed.	See 4 – Processing alarms
Close	Closes the selected alarm card without further actions.	—

If a received alarm is acknowledged, accepted or edited, the user is automatically accepted as the owner and the event card is removed from the stack for all other users.

3.2 User rights

The Events module is only available to company users. The following user groups have access to the application:

- Country administrators / deputies
- Operators
- Technicians

Other users can only present events by means of reports.

3.3 Adapting views

The view can be adapted to suit the user's requirements. For example, numerous filter and sorting options are provided. These settings can also be saved.

EMC distinguishes between standard views and user-defined views as follows:

standard views are provided by the system and vary according to the applicable user role;

user-defined views can be freely created and saved.

3.3.1 Standard views

The module provides standard views to quickly provide an overview. Filters and columns are already defined in the standard views.

The following standard views are available:

Name	Owner	Remarks
Current events	Shows all alarms in an alarm state.	The Events module always starts with this view.
My events	Shows all alarms assigned to the current user (owner).	—
Watched by me	Displays all of the alarms monitored by the user.	—

3.3.2 User-defined views

User-specific views can be defined and stored in the Events module. In this way, for example, all of a customer's alarms or all alarms in a particular state can be quickly accessed.

To create or edit a user-defined view, select the "Create/Edit View" function.

To select filter criteria, the checkbox belonging to the corresponding column must be ticked. The following filter criteria (depending on the column you have selected) are provided:

- < less than
- <= less than or equal to (\leq)
- = equal to
- >= greater than or equal to (\geq)
- > greater than
- <> not equal to (\neq)

The view can be saved with the "Save View" function so that it can be recalled later. Existing user-defined views can be overwritten if required.

They can likewise be deleted. To do so, activate the X symbol beside the name of the user view (navigate with the mouse over the name).

4 Processing alarms

The Edit mode is activated using the "Edit Event" function or by doubleclicking on an alarm.

Note that some settings can be overwritten by the subsystem (e.g., DESIGO INSIGHT). If this is not wanted, appropriate configuration is required.

4.1 General settings

Name	Description	Overwriting by the subsystem possible?
Nodes	Assignment of the alarm to the node structure.	Yes
Quality	Assignment of a quality/category.	No
Event requires acknowledgement	The alarm must be acknowledged in EMC. Acknowledgements are entered in the history.	No
Configured	The subsystem can no longer overwrite the configuratio of the alarm (e.g., the description, assignment of the node structure).	No

4.2 Details

This section provides additional information on the selected alarm.

Name	Description
Alarm message	Name or description of the alarm
Alarm limit	Limit value of the alarm (e.g., temperature limit: 24 °C)
Alarm value	Current value of the alarm (e.g., current value: 25°C)
Text	Text for the alarm in the subsystem
Last change	Time of the last change in state in the subsystem
Reception time	Time of reception of the alarm in EMC
Device	System that sends the alarm to EMC
Monitored by	List of users currently monitoring the alarm
Customer	The customer to whom the event in EMC is assigned

4.3 Description

Detailed descriptions can be entered in this text field. The text can be formatted (e.g., text color) can contain lists as well as links.

This setting can be transferred by the subsystem (e.g., by DESIGO INSIGHT).

4.4 To do

This section is used to enter work steps that are to be carried out upon occurrence of the alarm. Options for text formatting are available.

This setting can be transferred by the subsystem (e.g., by DESIGO INSIGHT).

4.5 Comments

Comments on a selected event can be placed at this position. Each entry is assigned the name of the author and the time of creation. The comments are sorted in decreasing chronological order.

4.6 Overview

This section provides an analysis of the selected alarm. You can select between "Day", "Week", "Month" and "Year" as the period to be analyzed. The first part of the overview shows the timing component of the different states during the selected period. Either a pie chart or a tabular view can be used for the presentation.

The second part of the overview presents the timing profile of the changes in state in the form of either a line chart or table.

4.7 History

All changes in settings to a selected alarm can be traced by means of the tabular presentation of the history. An entry consists of the property that has been changed with an indication of the former value and the time at which the change occurred. By clicking on the column header, the entries can be sorted accordingly. The persons who made the changes are also displayed.

5 Reports

Alarms can be output in EMC reports and in the module analysis. In doing so, the priority of the alarms can be used as a filter criterion. If different filter criteria are selected when requesting a report, all alarms matching at least one of the criteria are output.

Siemens Switzerland Ltd
Industry Sector
Building Technologies Division
Gubelstrasse 22
6301 Zug
Switzerland
Tel. +41 41-724 24 24
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