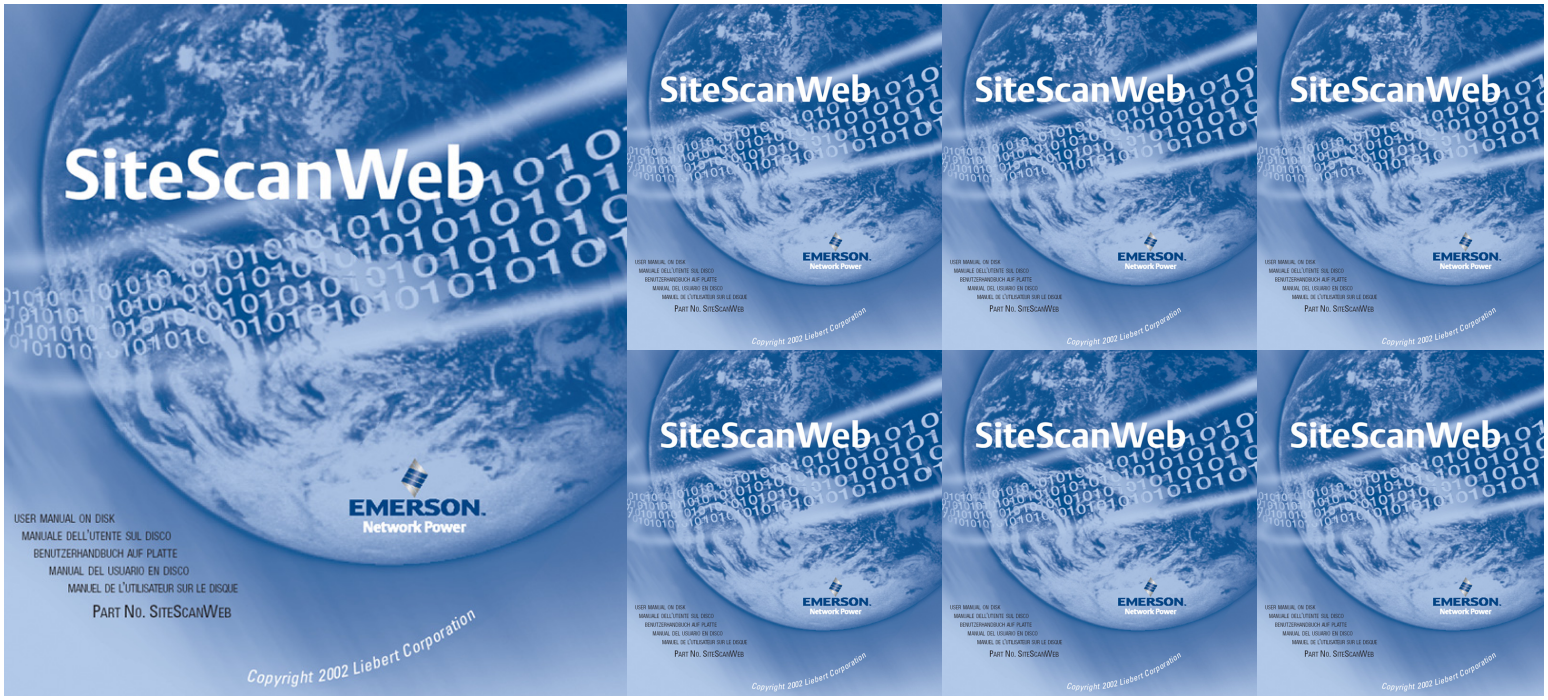
Monitoring
For *Business-Critical Continuity™*

Liebert® SiteScan® Web

User Manual



EMERSON™
Network Power

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TECHNICAL SUPPORT

How Do You Contact Emerson for Technical Support?

For help on setting up Liebert SiteScan Web or any other monitoring product, contact Emerson's Software Technical Applications Support Center at:

UNITED STATES	1 800 222 5877
FRANCE	+33 (0) 1 46 87 51 52
GERMANY	+49 (0) 89 99 19 220
ITALY	+39 (0) 2 98250 324
NETHERLANDS	+31 (0) 475 503333
UNITED KINGDOM	+44 1628403200
EUROPE	+800 11554499
ASIA	+800 11554499
AUSTRALIA	1 800 147704
NEW ZEALAND	0 800 447415
WORLDWIDE	1 614 841 6755
	FAX: 1 740 833 8631
	All Products: **http://www.liebert.com** Liebert SiteScan Web: **http://sitescan.liebert.com**
	E-mail: **liebert.monitoring@emerson.com**

1.0 WHAT IS LIEBERT SITESCAN WEB?

Liebert SiteScan Web uses a network of microprocessor-based control modules to monitor and control Liebert precision cooling, power, UPS and other critical equipment.

Liebert SiteScan Web enables the user to monitor and control equipment in a single building, an entire campus or a network of facilities around the globe. A Liebert SiteScan Web system utilizes a Web-based server running Windows XP, 2003 Server or 2000 and a conventional Web browser to gather information, change operating parameters, run reports and perform similar functions on various types of critical equipment.

1.1 How Does Liebert SiteScan Web Work?

A central Web-based server communicates with control modules and generates Web pages that may be accessed using a conventional Web browser. Liebert SiteScan Web allows you to gather information, change operating parameters, run reports and perform other critical monitoring system functions on equipment in a single facility or in dozens of locations.

The Web server and Liebert gateway communicate over an Ethernet network. The Liebert gateway communicates to the Liebert control modules using the Control Module network (CMnet) and the ARCnet156 protocol. The control modules communicate with the Liebert environmental and power equipment using the Information Gathering Network (IGMnet) or to contact closure equipment using a signal cable.

Customers access the information presented as a result of these functions using a Web browser. Internet Explorer is the browser supported by the Liebert SiteScan Web server.

1.2 Purpose of This Manual

This manual is intended to serve as an operation manual for Liebert SiteScan Web. The manual presents instructions and illustrations to assist operators with day-to-day activities that may be required for managing a Liebert SiteScan Web system.

Functions typically performed by an Emerson Network Power Liebert Services representative are not covered in this manual:

- Installing the Liebert SiteScan Web software
- Connecting equipment that will be monitored by Liebert SiteScan Web
- Configuring equipment in the Liebert SiteScan Web software

2.0 WHO CAN BENEFIT FROM LIEBERT SITESCAN WEB?

Any industry operating devices utilizing the BACnet protocol can benefit from using Liebert SiteScan Web to protect valuable equipment, data and other assets in the event of power or mechanical failure.

Different people in an organization need to know different things about the operation of critical facilities. Liebert SiteScan Web has the unique ability to be tailored to provide various levels of information to those in your organization responsible for system operations.

Examples include personnel running a data center, an entire facility, an enterprise-wide network or a building management system (BMS).

2.1 Data Center

Those responsible for the operation of large data or telecommunications centers must be aware of all protective infrastructure within these facilities.

They need up-to-the minute information that will allow them to keep systems operating—no matter what the situation.

2.2 Facility

These people are interested in the performance of critical operations in the context of an entire facility.

Events in one area of a facility can directly affect the operation of critical systems in another and vice versa.

2.3 Enterprise

Multiple sites mean multiple responsibilities for those in charge of an enterprise-wide network and communications system.

They need to know the status of many remote locations to keep the entire organization working smoothly.

2.4 BMS Interface

Liebert SiteScan Web can interface with an existing building management system (BMS) or other facility supervisory equipment for expanded monitoring capability.

3.0 WHAT IS REQUIRED TO USE LIEBERT SITESCAN WEB?

Visit the Liebert Web site at **http://sitescan.liebert.com** for the latest product information. The Web site always has the most detailed and up-to-date information on system requirements and Liebert SiteScan Web's capabilities.

3.1 Liebert SiteScan Web Server Requirements

Liebert SiteScan Web is based on server/thin-client architecture, designed around the open standards of Web technology. The Liebert SiteScan Web Server communicates using ASHRAE's BACnet/IP protocol and is accessed using a Web browser over the owner's intranet or external through the Internet. The intent of the thin-client architecture is to provide operators complete access to the system via a standard Web browser. The thin-client Web browser Graphical User Interface (GUI) supports Microsoft® Internet Explorer (version 7.0 or later). The Liebert SiteScan Web server software supports Windows 2000 and XP platforms and support for Windows 2003 Server.

System configuration requirements differ slightly for the Liebert SiteScan Web server and any associated client workstations. **Table 1** shows the recommended requirements for the server and client workstations running on a Microsoft Windows Platform.

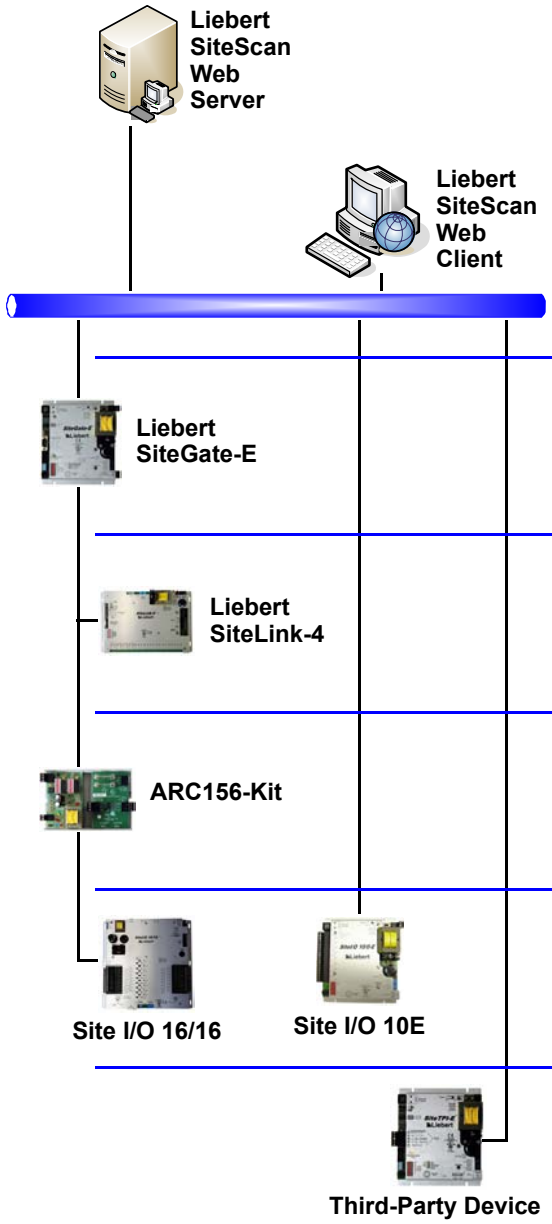
Table 1 Minimum requirements - Liebert SiteScan Web server* and client workstations

Feature	Minimum Server Requirements*	Client Workstation Requirements
Operating system	Windows 2000, 2003 or XP	Windows 95, 98, NT 4.0, 2000, XP
Browser	Microsoft Internet Explorer v7 or later with Sun Systems Java (**www.java.com**)	Microsoft Internet Explorer v7 or later with Sun Systems Java (**www.java.com**)
Computer system (CPU) speed	The more simultaneous users on a system, the faster the CPU speed required to maintain good user response time. For a system with: • One or two active users, a 2 GHz CPU should provide adequate performance. • Three or more active users, select a 3 GHz or faster CPU. • 10 or more active users, consider multiple CPUs. Moving the database to another computer is more economical than running both Liebert SiteScan Web and the database on a multiple CPU system.	For adequate performance under Windows 95, 98 or NT 4.0: • 700 MHz Pentium® III processor with 512 Mb RAM. For adequate performance under Windows 2000 or XP: • A processor of 1.5 GHz or better is recommended.
System memory	1024Mb system memory recommended to eliminate excessive swap file usage. The responsiveness of larger systems will benefit directly from more memory.	—
Hard disk space	2Gig free hard disk space available for Liebert SiteScan Web **Note:** A SCSI hard disk interface is recommended for users making extensive use of alarms or historical trends.	10Mb of free hard disk space available for caching images
USB ports	USB ports available for system backups, preferably front-mounted to avoid disturbing computer room cabling.	—
CD drives	CD-ROM drive (CD-RW drive recommended for alternate backup purposes)	—
Mouse/ keyboard	2-button mouse / 104-key keyboard	2-button mouse / 104-key keyboard
Remote control software	For large systems with remote sites, Liebert strongly recommends using remote control software—for example, Windows Remote Desktop, VNC or PC Anywhere—to allow Liebert service engineers to access the server remotely.	—
Display	SVGA display card and monitor that support a resolution of 1024x768 pixels with True Color (32-bit) or better	SVGA display card and monitor that support a resolution of 1024x768 pixels with High Color (16-bit) or better
Network	10/100 Mbps Ethernet network card	Network connection capable of reaching the server—for example, an Ethernet network card or a dial-up modem connection.

* Liebert SiteScan Web should have its own dedicated server. Having other web server applications—such as Apache or IIS—running on the same machine will cause conflicts.
Running the client-side browser on the server will add to the server's load; to compensate, increase CPU and memory headroom.

4.0 TYPICAL LIEBERT SITESCAN WEB SYSTEM

A typical Liebert SiteScan Web system may include the components shown in the figure below.



Server Software and Client License

- **Liebert SiteScan Web Server** - A dedicated computer running Liebert SiteScan Web server software, including a database that stores system configuration, custom graphics and equipment interfaces. For hardware and operating requirements, see **Table 1**.
- **Liebert SiteScan Web Client** - A workstation on the network that uses a conventional Web browser, such as Internet Explorer, to access the Liebert SiteScan Web server. The workstation may also be used for functions not related to Liebert SiteScan Web.
- **Ethernet Backbone** - The customer's existing network, including router and wiring or wireless connection gear.

Router Gateway

- **Ethernet Gateway** - The gateway that communicates with the Liebert SiteScan Web server, other Ethernet gateways and the control module network.

IGM Interface Control Modules

- **Liebert SiteLink units** - Control modules that provide IGM communications between the Liebert environmental and power equipment and the Liebert gateway.

ARCnet Communication Devices

- **ARCnet devices** - An ARC156-Kit, which must be installed on every ARC156 network; controls biasing and proper termination of the ARC156 network.

Input/Output Control Modules

- **Site I/O Modules** - A selection of modules that translate analog and digital signals within your critical environments. These modules may provide digital signals for output control.

Third-Party Interfaces

- **SiteTPI-E** - A monitoring and control module that enables non-Liebert Modbus devices to be incorporated into the Liebert SiteScan Web System; used to interface with third-party equipment such as generators, fire suppression systems or competitive gear.

5.0 Overview of Liebert SiteScan Web

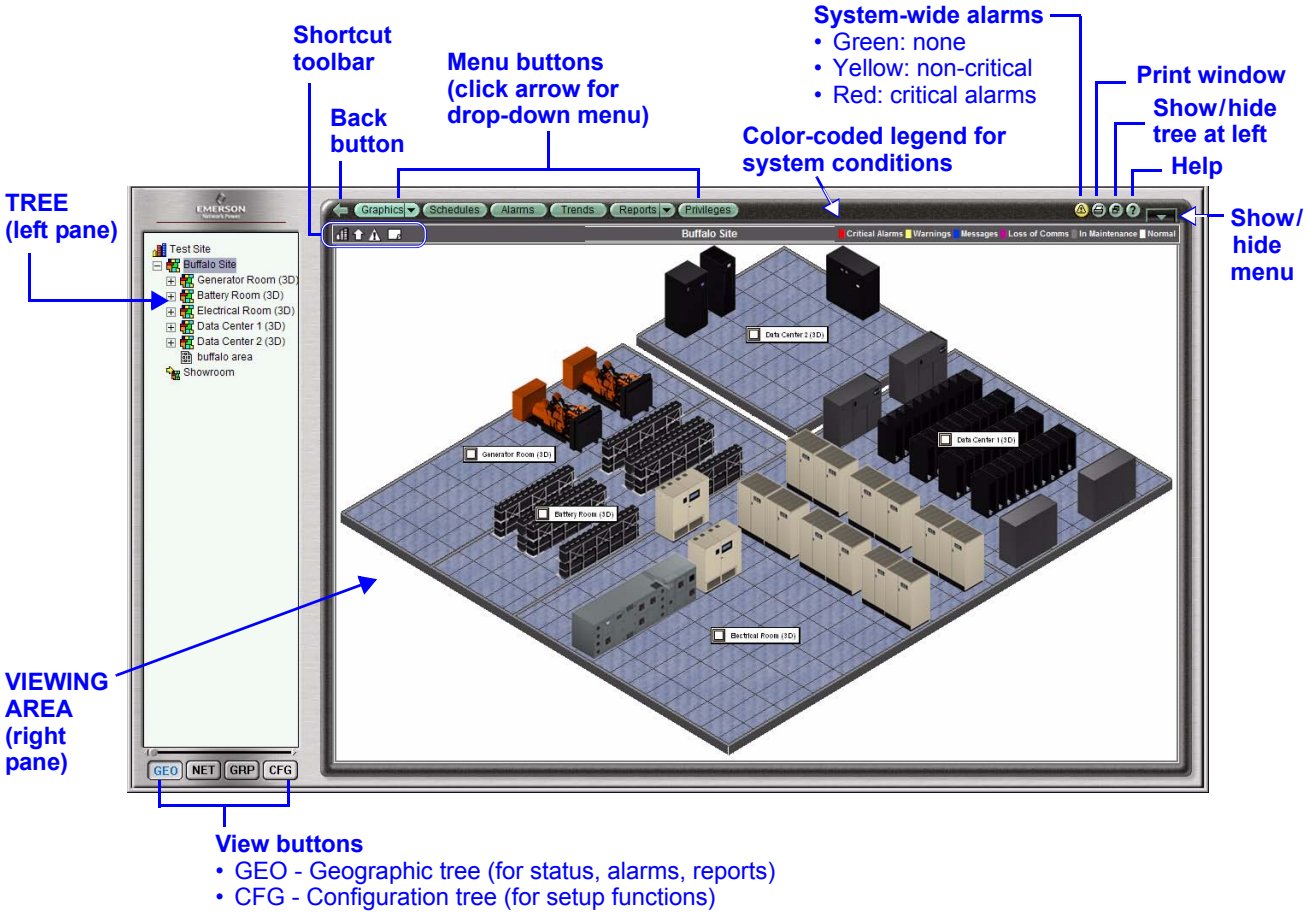
This section provides a quick look at the navigation and configuration features available through Liebert SiteScan Web's buttons and tabs.

Liebert SiteScan Web's view buttons—GEO and CFG—logically divide Liebert SiteScan Web's functionality.

- The **GEO** button displays the operational status and condition of configured devices.
- The **CFG** button is the entry point for all setup functions.

5.1 The Liebert SiteScan Web Workspace

The main parts of the Liebert SiteScan Web window are shown in the following example.



5.2 Menus and Buttons

Table 2 shows the main Liebert SiteScan Web features discussed in this manual and where to learn more about each.

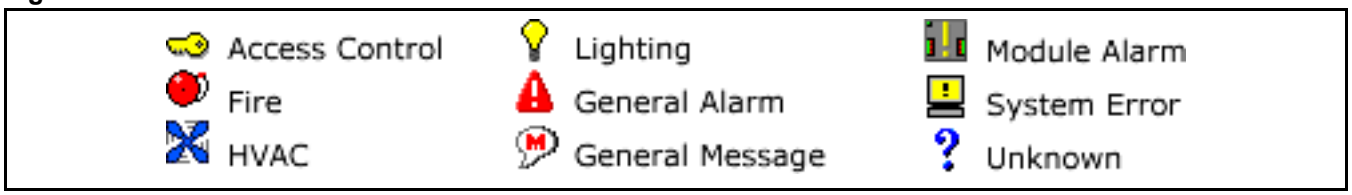
Table 2 View buttons and menu options - summary

Feature	Tab	Subcategories	For more information, see:
GEO View Button			
Graphics	—	—	**7.0 - Viewing Status**
Alarms	View	—	**8.2 - View Alarms**
	Messages	—	**8.3 - Messages**
	Actions	Alarm Popup	**8.4.1 - Alarm Popup Action**
		Print	**8.4.2 - Print Action**
		Run External Program	**8.4.3 - Run External Program Action**
		Send Alphanumeric Page	**8.4.4 - Send Alphanumeric Page Action**
		Send E-Mail	**8.4.5 - Send E-Mail Action**
		Send SNMP Trap	**8.4.6 - Send SNMP Trap Action**
		Write Property	**8.4.7 - Write Property Action**
		Write to Database	**8.4.8 - Write to Database Action**
		Write to File	**8.4.9 - Write to File Action**
	Enable/Disable	—	**8.5 - Enable/Disable**
	Reports	—	**8.8 - Alarm Reports**
Trends	View	—	**9.1 - View an Existing Trend Graph**
	Configure	—	**9.3 - Configure Trends**
Reports	View	—	**10.2 - View Reports**
	Configure	—	**10.3 - Set Up Report Options**
	Design	—	**10.4 - Set Up a New Report**
CFG View Button			
My Settings	Settings	—	**11.1.1 - Settings**
	Contact Info	—	**11.1.2 - Contact Info**
System Settings	General	—	**11.2.1 - General**
	Daylight Saving	—	**11.2.2 - Daylight Saving**
Operators	—	—	**11.3.1 - Set Up Operators**
Privilege Sets	—	—	**11.4.1 - Add a Privilege Set**
Operator Groups	—	—	**11.3.2 - Create Operator Groups**
Services	—	—	**11.5 - Services**
Trends Display Setup	—	—	**11.6.1 - Trends Display Setup**
Trends Print Setup	—	—	**11.6.2 - Trends Print Setup**

5.3 Informational Icons in the Navigation Tree

The alarm icons used in the navigation tree are shown in **Figure 1**.

Figure 1 Alarm icons



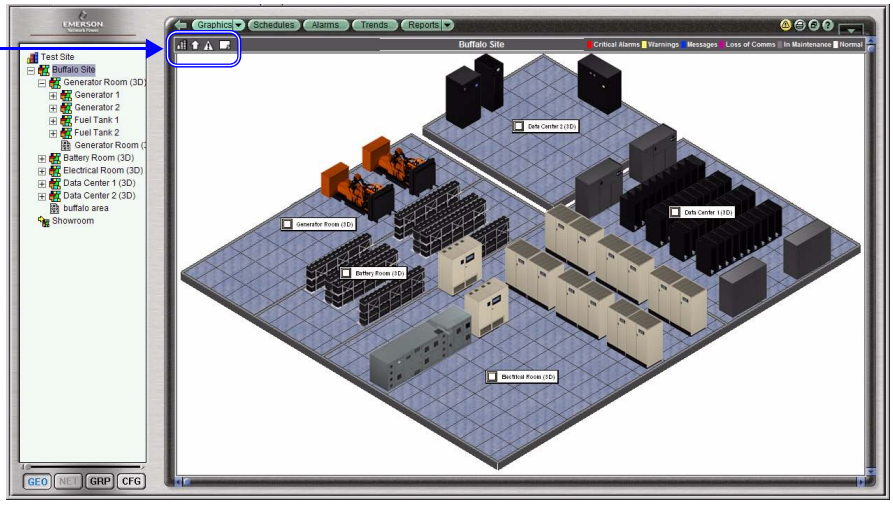
The icon indicates the alarm category. The icon's color indicates severity, as shown below:

Color	Severity
Blue	Maintenance needed
Yellow	General non-critical alarm
Red	Critical alarm

5.4 Shortcut Toolbar

A toolbar with shortcut icons appears directly below the menu action buttons in the right pane. These icons provide quick access to key features—for example, move up one level in the tree, add a note, view a trend graph, configure an item or a maintenance schedule.

Shortcut toolbar
Icons vary according to selection



The icons vary according to the selected item. **Table 3** provides a summary of these icons and where to find more information.

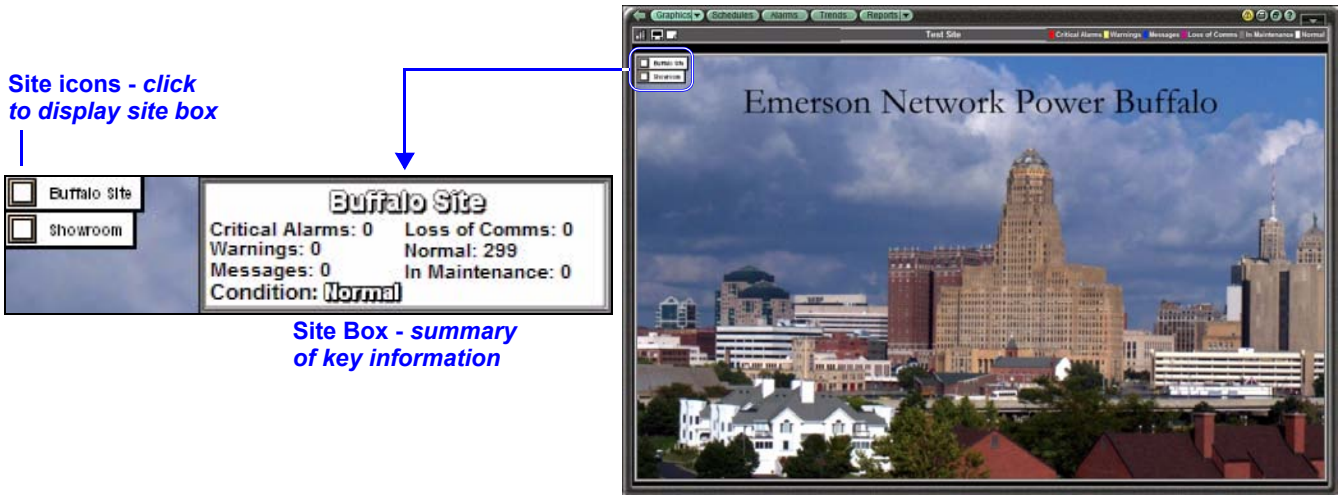
Table 3 Shortcut icons

Icon		Click the icon to:	For details, see:
	System Overview	Move to the top level of the tree in the GEO view.	**5.4.1 - System Overview Shortcut**
	Summary Bezel	Display summary data for a selected site.	**5.4.2 - Summary Bezel Shortcut**
	Show/Hide Notes	Add notes about any item or toggle between the notes window and the previous view.	**5.4.3 - Show/Hide Notes Shortcut**
	Area Graphic	Display a floor plan of a selected item in the tree.	**5.4.4 - Area Graphic Shortcut**
	Up One Level	Move up one level in the GEO tree.	**5.4.5 - Up One Level Shortcut**
	Maintenance Mode	Schedule maintenance for a selected point.	**5.4.6 - Maintenance Mode Shortcut**
	Trend Graphs	View a trend graph of a selected point.	**5.4.7 - Trend Graph Shortcut**
	Edit Page	View or change the characteristics of a selected unit or point.	**5.4.8 - Edit Page Icon**
	Pencil	Edit unit and area names, as well as setpoints for applicable units.	**5.4.9 - Pencil Icon**
	Save changes	Save changes to the configuration.	**5.4.10 - Save Changes Icon**
	Unlock	Unlock to change the position of a unit on the floor plan.	**5.4.11 - Unlock / Lock Units Icons**
	Lock	Save and lock a unit's position on the floor plan.	

5.4.1 System Overview Shortcut

At any level in the GEO tree:

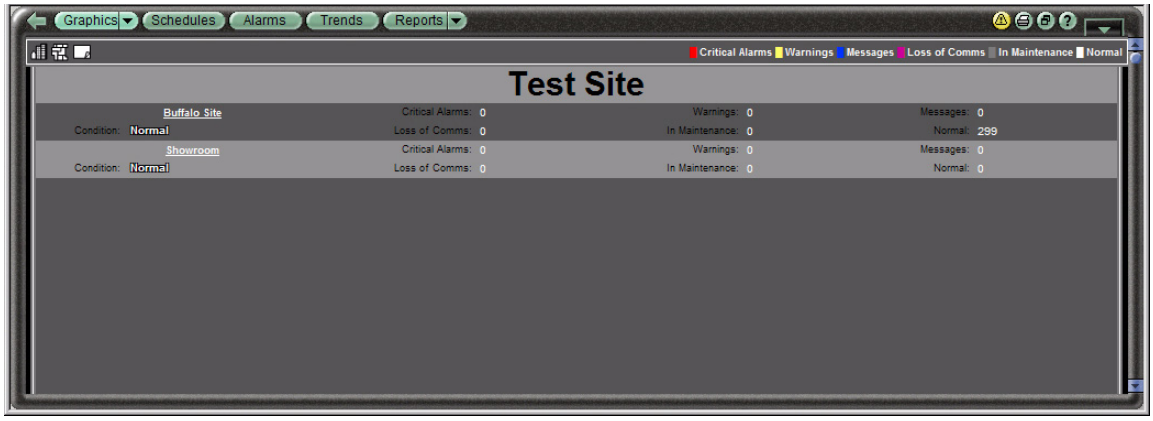
- Click on the System Overview icon to navigate to the highest level of the GEO tree.
- Site icons appear below the shortcut toolbar, as shown in the following example. Click on any site icon to display key information in a site box—the current condition and the number of alarms, warnings and other conditions.
- The Summary Bezel icon displays the same type of information for multiple sites (see **5.4.2 - Summary Bezel Shortcut**).



5.4.2 Summary Bezel Shortcut

With a site selected in the GEO tree:

- Click on the Summary Bezel icon to display summary data for all areas in the selected site:
  - Condition (overall status)
  - The number of critical alarms and warnings detected, as well as messages sent
  - Statistics on conditions: loss of communications, in maintenance, normal operation
- The same type of information is available at the highest level in the tree (see **5.4.1 - System Overview Shortcut**).



5.4.3 Show/Hide Notes Shortcut

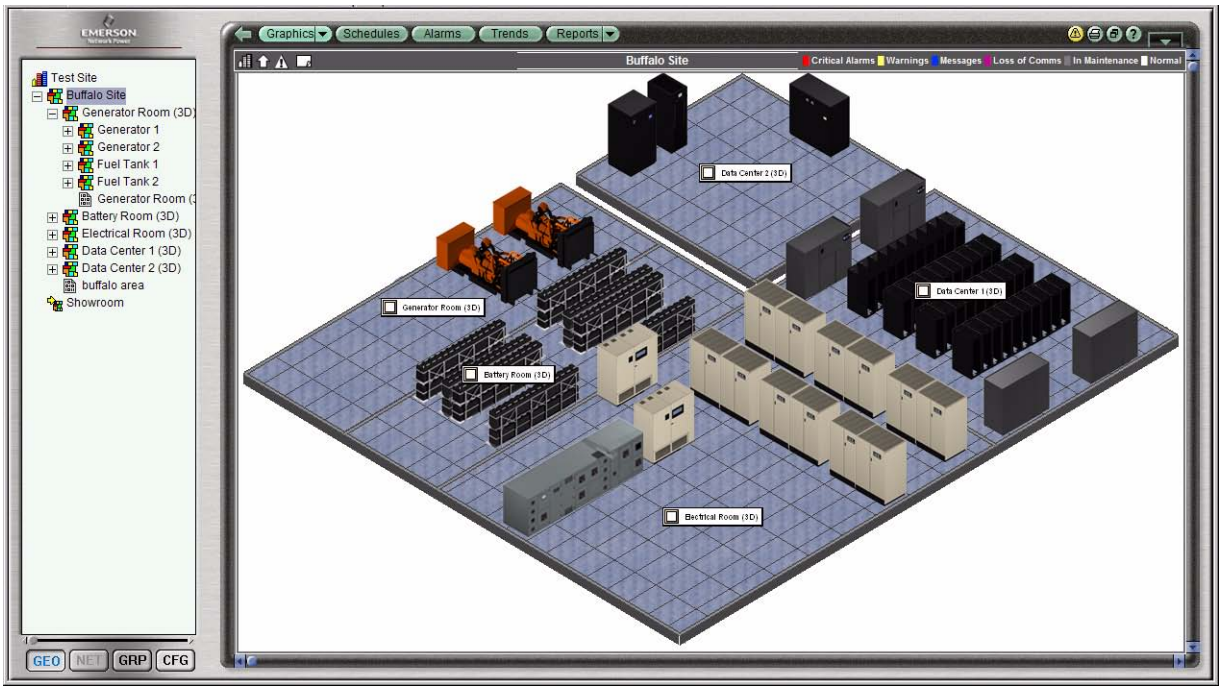
With an item selected in the GEO tree:

- Click on the Show/Hide Notes icon to display a notes window, as shown below.
- Enter text as desired, then click **OK** to save the notes (or **Cancel** to close without saving).
- Click on the Show/Hide Notes icon to return to the previous view.

5.4.4 Area Graphic Shortcut

With a site selected in the GEO tree:

- Click on the Area Graphic icon to display a floor plan of the selected site, as in this example.
  Note: If any units have moved out of view, press and hold the Ctrl key and right-click, then choose **Clear Unit Positions** from the popup menu. Reposition units as needed.



5.4.5 Up One Level Shortcut

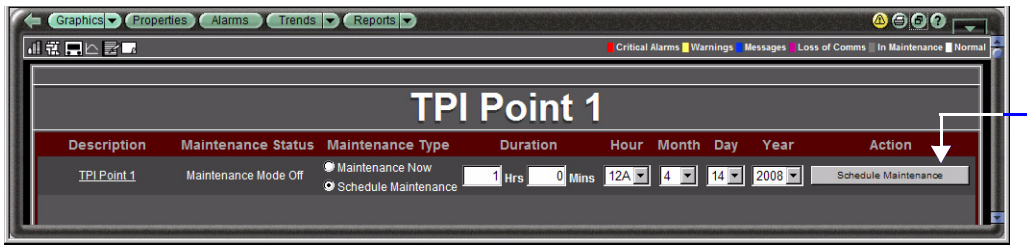
Use this icon to move up one level in the GEO tree:

- Click on the Up One Level icon to move up a level in the GEO tree—in the example above, from the site shown to the next higher level.

5.4.6 Maintenance Mode Shortcut

With a point selected in the tree:

- Click on the Maintenance Mode icon to view or change the maintenance schedule of the selected point.
- The example below includes the following data:
  - Description: shows the name of the selected item—for example, *TPI Point 1*.
  - Maintenance Status: displays whether the maintenance function is *Off* or *On*.



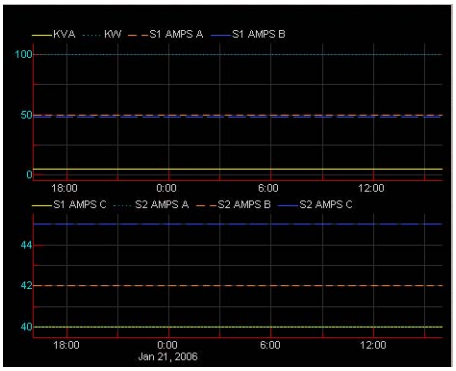
Action button - *Maintenance Now* or *Schedule Maintenance*

- Maintenance Type - select one of these options:
  - **Maintenance Now** - Click this button to change the Action button to **Maintenance Now**.
  - **Schedule Maintenance** - Click to change the Action button to **Schedule Maintenance** and display time and date options for the maintenance.
- Duration: enter the maintenance duration for the device in hours and minutes.
- If **Schedule Maintenance** is selected, specify the time and date for maintenance to begin.
- Action button - toggles according to the Maintenance Type selected for this point:
  - Click the **Maintenance Now** button to perform maintenance immediately.
  - Click the **Schedule Maintenance** button to save and activate the maintenance schedule.
- After clicking an Action button, click the **OK** button to confirm your choice (or **Cancel** to prevent the operation).

5.4.7 Trend Graph Shortcut

With a point selected in the tree at left:

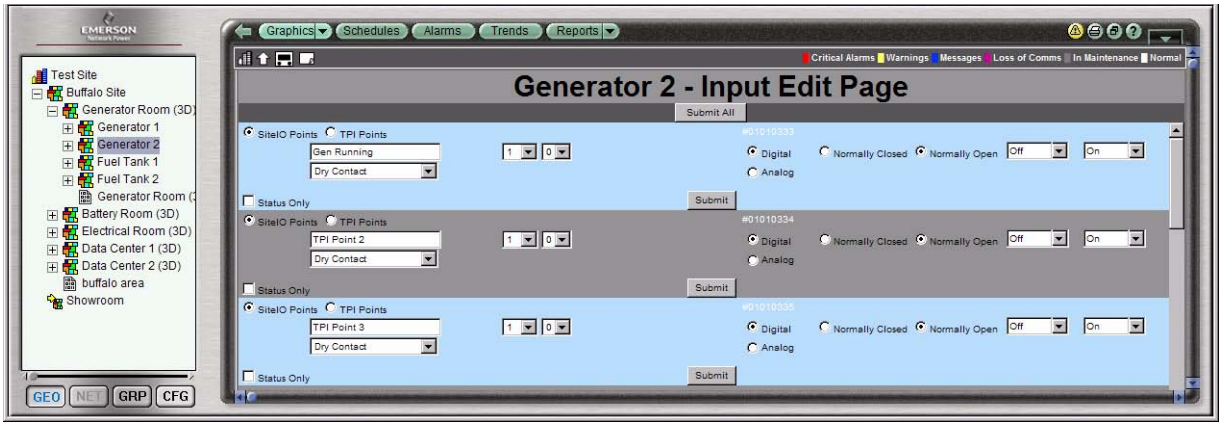
- Click on the Trend Graph icon to view a trend graph of the selected point, as in the example shown at right.
- See **9.0 - Viewing Trends** for details.



5.4.8 Edit Page Icon

With a unit or data point selected in the tree at left:

- Click on the Edit Page icon to view or change the characteristics of the selected unit or point.
- Make changes as needed.
- When finished, click the **Submit** button for a single item (or click **Submit All** to save all changes). To cancel any changes, navigate to another page without clicking any Submit buttons.



5.4.9 Pencil Icon

- When this icon appears in the shortcut toolbar, click to change the name of a unit or area.
- After making the change, click the **Save Changes** diskette icon described in the next section.

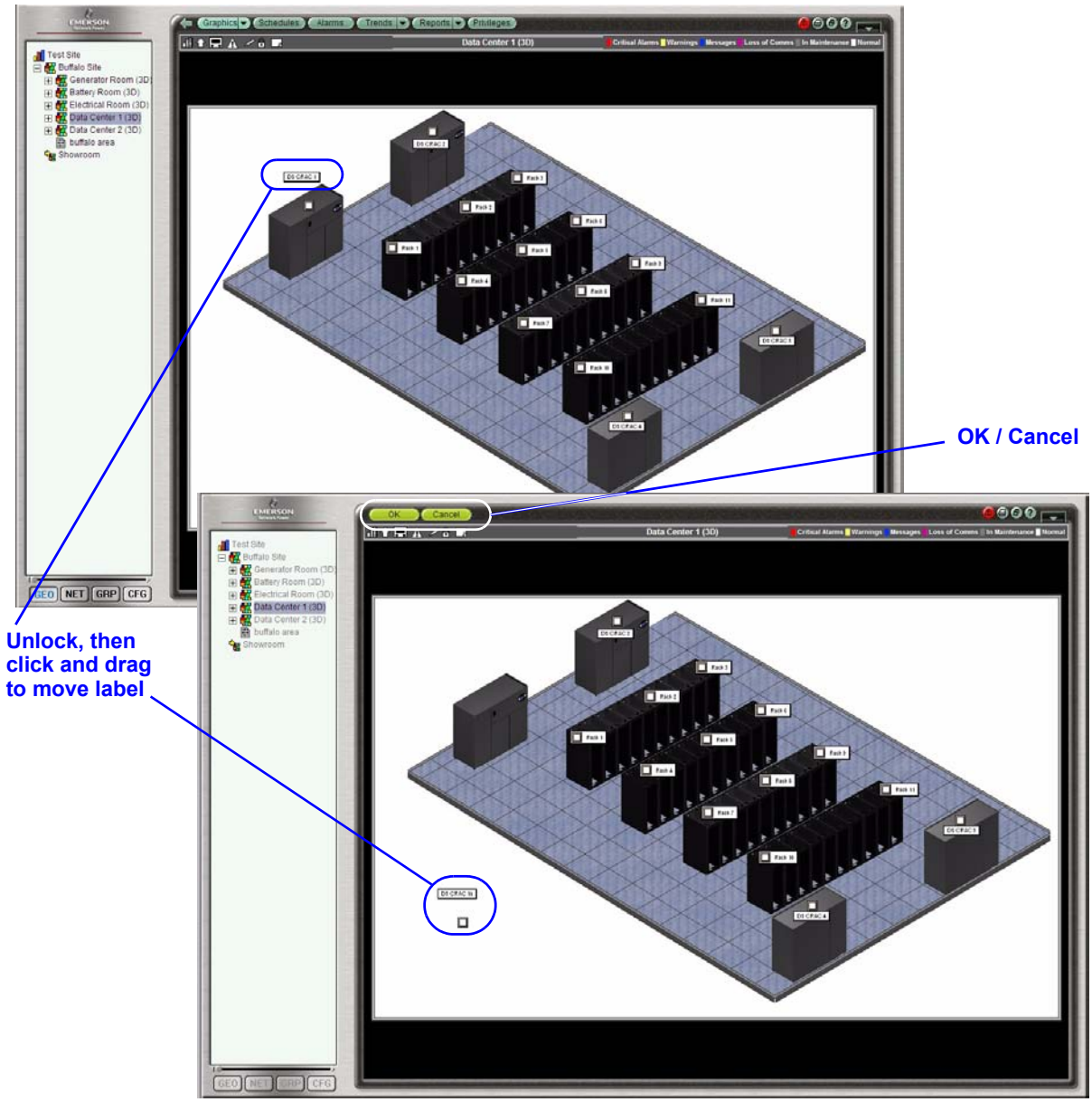
5.4.10 Save Changes Icon

- When this icon appears in the shortcut toolbar, click to save changes after using the **Pencil** icon to change unit or area names or using the **Unlock** icon to move units around on the floor plan.
- After clicking this **Save Changes** diskette icon, the **OK** and **Cancel** buttons appear at the top of the screen, as shown in the example in the next section.

5.4.11 Unlock / Lock Units Icons

To move a unit or its label on the floor plan:

- Click the **Unlock** icon in the shortcut toolbar.
- Click on the unit or its label and drag to the desired position.
- At the top of the window, click the **OK** button to save changes (or **Cancel** to clear any changes).
- Click the **Lock** icon in the shortcut toolbar to prevent users from moving the unit or its label on the floor plan.



5.5 Liebert SiteScan Web Features

Table 4 lists the features available in Liebert SiteScan Web.

Table 4 Features available in Liebert SiteScan Web

	Liebert SiteScan Web	SiteScan 2000 w/ Alert
System Feature		
Current Version	4.0	2.6 w/ 3.0
Operating Systems	Windows NT 4.0 w/SP6 or higher, Windows 2000, Windows XP, Windows 2003 Server	Windows 95, Windows 98 & Windows ME
Internationalization	English, Spanish, French, Dutch, Germany & Simplified Chinese, Traditional Chinese, Korean	
Database	MS Access, SQL Server & Oracle	
Server-Based	Internet Explorer	Client Software Required
Help	HTML Based	Windows Help
Security		
User Privileges & Accounts	✔	
Run as Service	✔	
Automatic Logout	✔	✔
Operator Audit Logging	✔	✔
Graphics		
3-D Floorplans	✔	✔
2-D Floorplans	✔	✔
Trending	✔	✔
Trend Historian	✔	✔
Alarm Management		
Alarm Filtering	✔	✔
Multiple Alarm Management	✔	✔
Comments to Alarm	✔	✔
Change Colors of Alarms		✔
Reporting Actions		
Alarm Escalation		✔
ASCII File Write	✔	✔
Numeric Paging		✔
Alpha-Numeric Paging	SMTP	Modem Dial-Out (TAP Only)
Parallel Print	✔	✔
Serial Output	✔	✔
Play Sound Wave	✔	✔
Run External Command	✔	✔
Facsimile		✔
Email	✔	w/SiteTrap
Emerson Network Power Liebert Services Remote Monitoring	w/Liebert RM Agent	P
SNMP	w/ Liebert RM Agent	w/ SiteTrap
Format the Output	✔	✔
Local Notifications		
Applications to Foreground		✔
Flash Application Icon		✔
Play Default Beep	✔	✔

6.0 GETTING STARTED WITH LIEBERT SITESCAN WEB

This section explains how to start the Liebert SiteScan Web application, log in and change your password. You should change the default password for security purposes.

Saving Changes

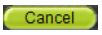
You must save certain changes to Liebert SiteScan Web. Whenever you make a change that is not yet saved, the OK and Cancel buttons 

appear at the top of the toolbar:

- Click on the **OK** button 

to save your changes.

or

- Click on the **Cancel** button 

to cancel your changes.

Using Internet Explorer

Liebert SiteScan Web is designed to work in Microsoft® Internet Explorer. If you use a different browser, screens appear in Wireless Access Protocol (WAP) formats.

6.1 Start Liebert SiteScan Web

To begin a session:

- Click on the **Start** button, then on **Programs**, then on **Internet Explorer**.
- Type the address of the Liebert SiteScan Web server in the Address Bar and press the Enter key.

6.2 Log on

After connecting to the server, the login screen appears, as shown at right.

To log on:

- Enter the user name in the Name box.
- In the Password box, enter the password provided by Liebert Services. To change the password, see **11.1.1 - Settings**.
- Click the **Log In** button.

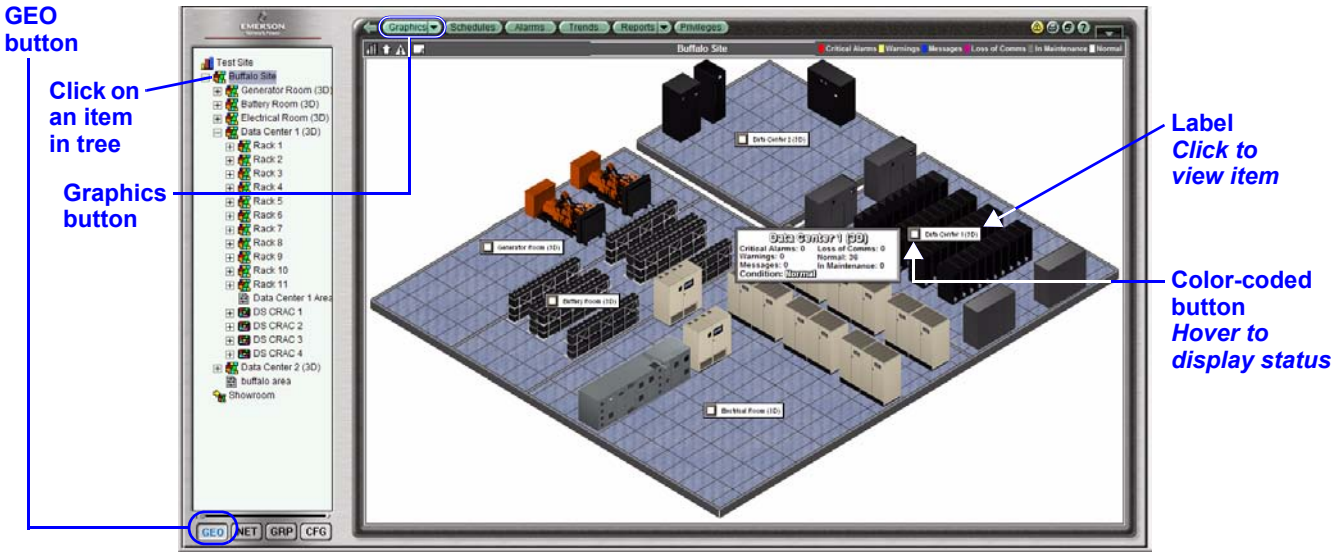
7.0 VIEWING STATUS

The **Graphics** button offers a quick look of the status of your entire system or any portion of it.

7.1 View Graphic Status

To view a graphic representation of your system:

- Click the **GEO** button in the bottom left corner.
- Click on an item in the geographic tree at left—**Buffalo Site** in the example below.
- Click the **Graphics** menu action button at the top. The example below shows a 3D floor plan.



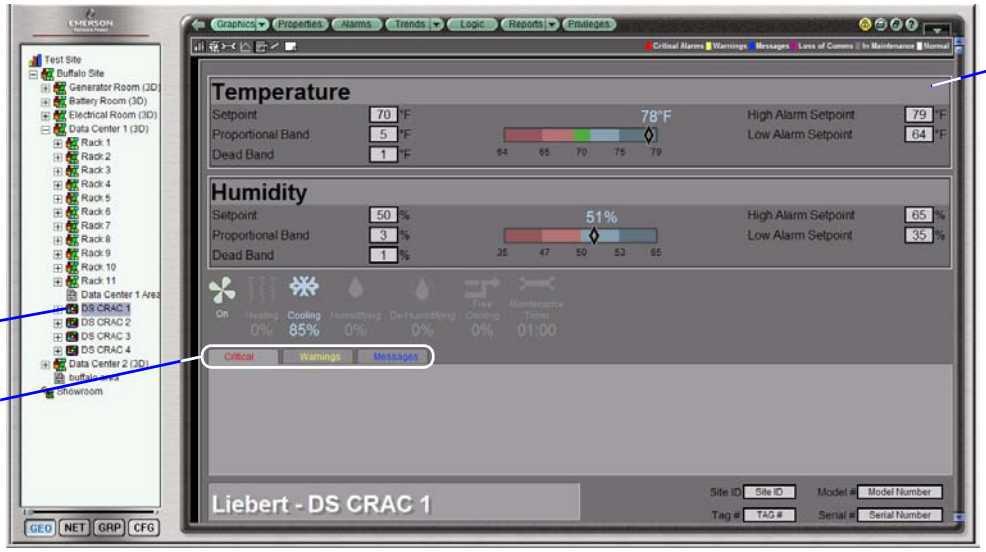
- Each item in the floor plan has a clickable site icon with two parts:
  - A text label with the user-assigned name
  - A color-coded button indicate whether active alarms are present (red) or not (white). For alarm details, see **8.0 - Managing Alarms**.

Color	Indicates:
Red	A critical alarm is present
White	No alarms are present

- Hover over the color-coded button to display key information in a popup box—the current status and the number of alarms, warnings and other conditions. This information is also available on a summary page for all components in the selected area (see **5.4.2 - Summary Bezel Shortcut**).
- Click on any part of the site icon to go to a view of that item.

7.2 View Unit Data

- To view the status of a unit, click on the device in the tree at left to display detailed information, as in this example of a Liebert Precision Cooling unit.



- In the Alarms section at the bottom of the window, click on any tab to display descriptive text for alarms that have been detected:
  - **Critical** - text description of critical alarms detected
  - **Warnings** - text description of warnings detected
  - **Messages** - text description of alarm messages sent

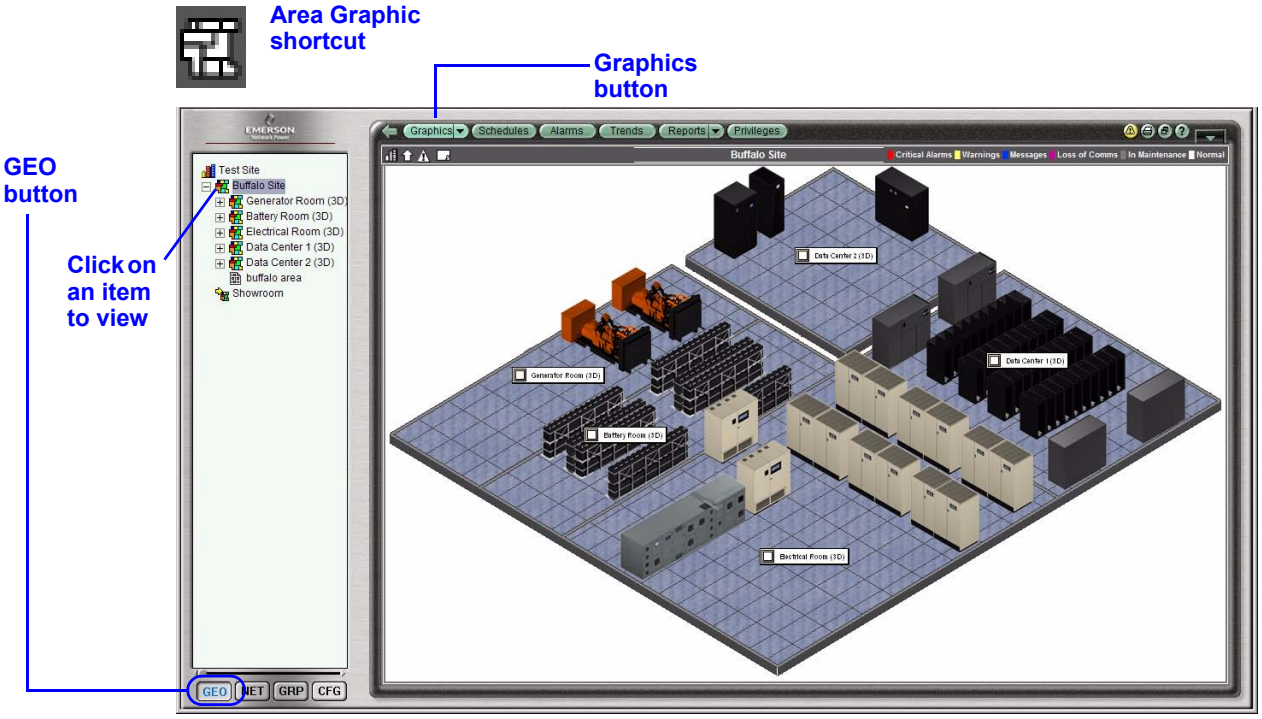
7.3 View an Area Graphic or Summary Data

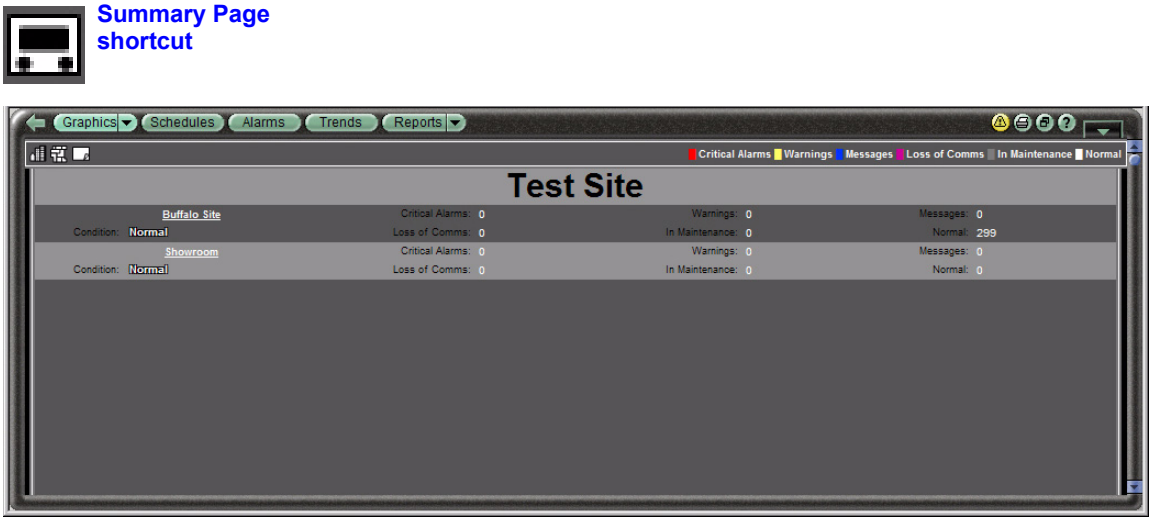
Two types of graphics are available in Liebert SiteScan Web:

- **Area Graphic** - a three-dimensional drawing showing device placement (purchased separately)
- **Summary Page** - a text listing with status of all components of a selected item (standard)

To choose a different view:

- Click the **GEO** button at bottom left, then click on an item in the tree at left.
- Click the appropriate shortcut—**Area Graphic** and **Summary Page** icons are shown below—or click the **Graphics** button down arrow and choose from the drop-down menu.





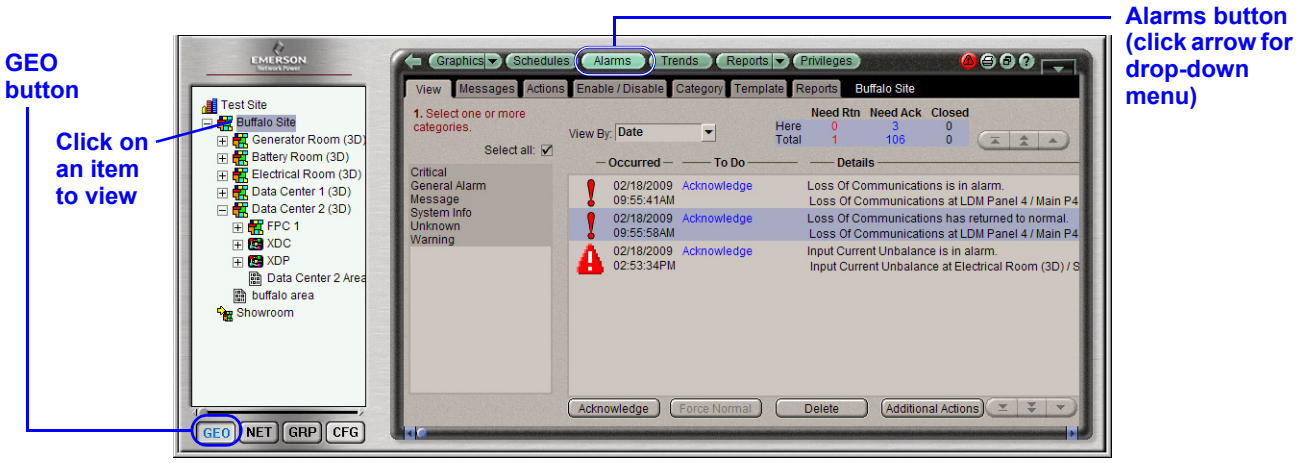
8.0 MANAGING ALARMS

The **Alarms** button offers quick access to alarm-related features:

- View, acknowledge and delete alarms
- Set up actions that Liebert SiteScan Web performs when an alarm is received
- Customize alarms by changing the message
- Generate alarm reports to view, print or save to a file

8.1 Alarms Window Overview

- Click the **GEO** button in the bottom left corner.
- Click on an item in the tree at left—**Data Center 2** in the example below.
- Click the **Alarms** menu action button at the top.
- The Alarms window has several tabs across the top; the example below shows the **View** tab.



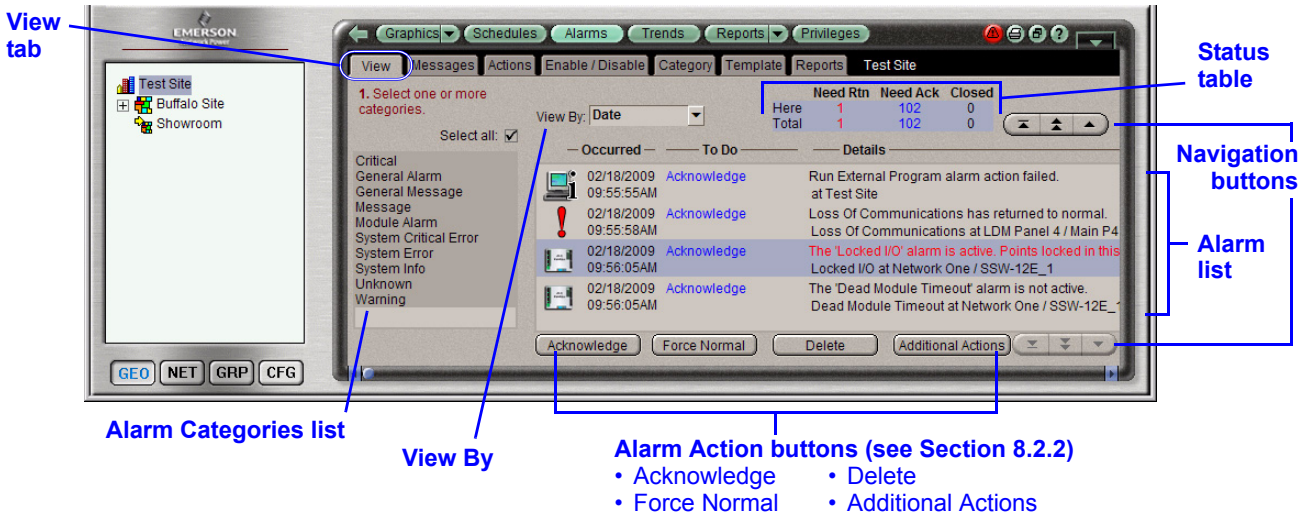
- The alarm list displays all alarms for the location selected in the tree at left, including all items below it in the tree.
- For details on viewing alarms, see **8.2.1 - View the Alarm List**.
- For instructions on responding to alarms, see **8.2.2 - Acknowledge and Delete Alarms**.

8.2 View Alarms

The **View** tab allows you to view alarms and perform functions such as acknowledging alarms.

To access the View functions:

- Click the **GEO** button, then click on an item in the tree at left.
- Click the **Alarms** button, then the **View** tab.



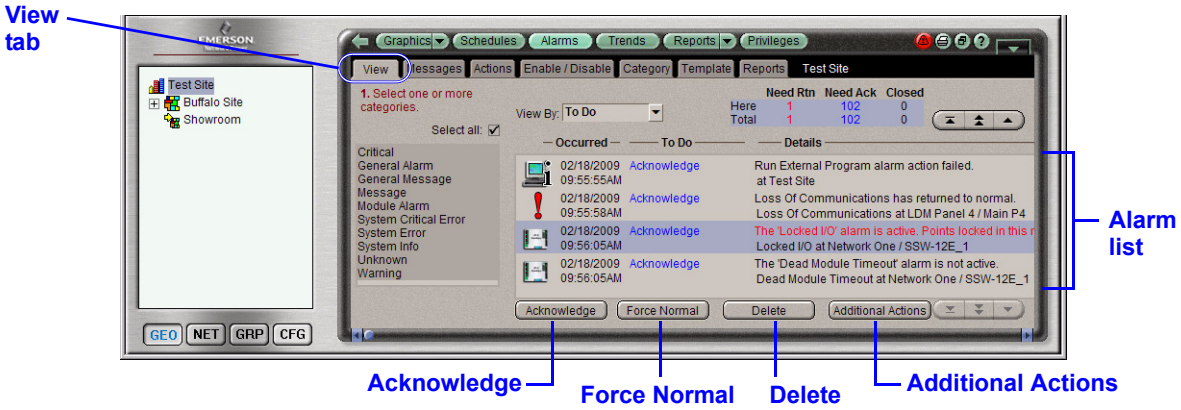
8.2.1 View the Alarm List

- Double-click on an alarm in the list to reveal or hide more details about the alarm. The alarm list displays three columns of information about each alarm:
  - **Occurred** The date and time the alarm was generated.
  - **To Do**
    - **Acknowledge** indicates the alarm needs to be acknowledged.
    - **Waiting for Normal** indicates the alarm requires a return-to-normal.
    - A check mark (✔) indicates the alarm is closed.
  - **Alarm Report** Displays the alarm message—a text description of what occurred and where.
- Use the navigation buttons at right to scroll through the list one alarm at a time, a page at a time or to the beginning or end of the list.
- To view all types of alarms or choose from the Alarm Categories list:
  - To display all alarms, click to place a check mark (✔) in the Select All box.
  - To display only selected alarms, click on an item in the Alarm Categories list. (Control-click to select additional items.)
- To sort or filter the list, click on the down arrow to the right of the View By box, then select an option from the drop-down menu:
  - **Date** Displays all alarms sorted by the time each alarm was generated, from newest to oldest.
  - **To Do** Displays only alarms requiring one or more actions to be done before they can be closed.
  - **Incident Group** Groups all alarms related to a particular incident with a bracket to the left of the icons—for example, an alarm and its subsequent return-to-normal event form an incident group.
- The status table to the right of the View By box offers a quick glance at the current state of alarms at the location selected in the tree (**Here**) and in the entire system (**Total**):
  - **Need Rtn** Number of alarms that need a return-to-normal
  - **Need Ack** Number of alarms that need to be acknowledged
  - **Closed** Number of alarms that are closed

8.2.2 Acknowledge and Delete Alarms

To access the alarm action functions:

- Click the **GEO** button, then click on an item in the tree at left.
- Click the **Alarms** button, then the **View** tab.



Acknowledge a Single Alarm

- Select an alarm that shows *Acknowledge* in the To Do column.
- Click the **Acknowledge** button below the list. A check mark (✔) appears in the To Do column.

Force a Return-To-Normal State

If an alarm is not followed by a return-to-normal event, you can force a Return-To-Normal state:

- Select an alarm that shows *Waiting for normal* in the To Do column.
- Click the **Force Normal** button below the list. A check mark (✔) appears in the To Do column.

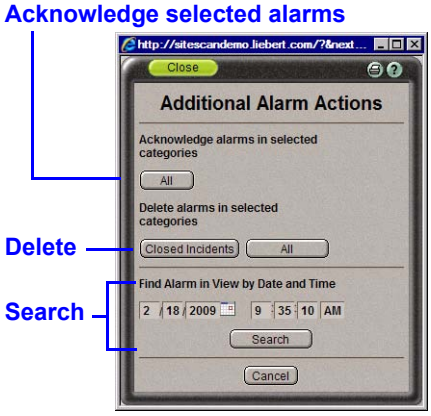
Delete a Single Alarm

- Select the alarm you want to delete from the list.
- Click the **Delete** button below the list. The alarm disappears from the list.

Additional Actions: Acknowledge/Delete Multiple Alarms, Search for an Alarm

The **Additional Actions** button allows you to acknowledge or delete multiple alarms all at once.

- Unless you want to acknowledge or delete all alarms, select the appropriate alarms—for example, click on View By **To Do**, then highlight alarms that show *Acknowledge* in the To Do column.
- Click the **Additional Actions** button below the list. The Additional Alarm Actions window opens, as shown at right.



Acknowledge Multiple Alarms

- To acknowledge multiple alarms, click the **All** button under Acknowledge Alarms in Selected Categories.

Delete Multiple Alarms

- To delete multiple alarms, click the appropriate button under Delete Alarms in Selected Categories:
  - **Closed Incidents** Removes incident groups of related alarms in which all alarms have been closed.
  - **All** Removes all alarms at the selected location in the tree.

Search for an Alarm by Time of Occurrence

- In this window, you may also search for an alarm generated on a particular date and time. Enter the desired date and time, then click the **Search** button. The Events screen will display the listing of alarm events as defined by the search criteria.

8.3 Messages

An alarm message is the text displayed in the Alarms **View** tab window and in alarm reports. An alarm message may consist of three parts:

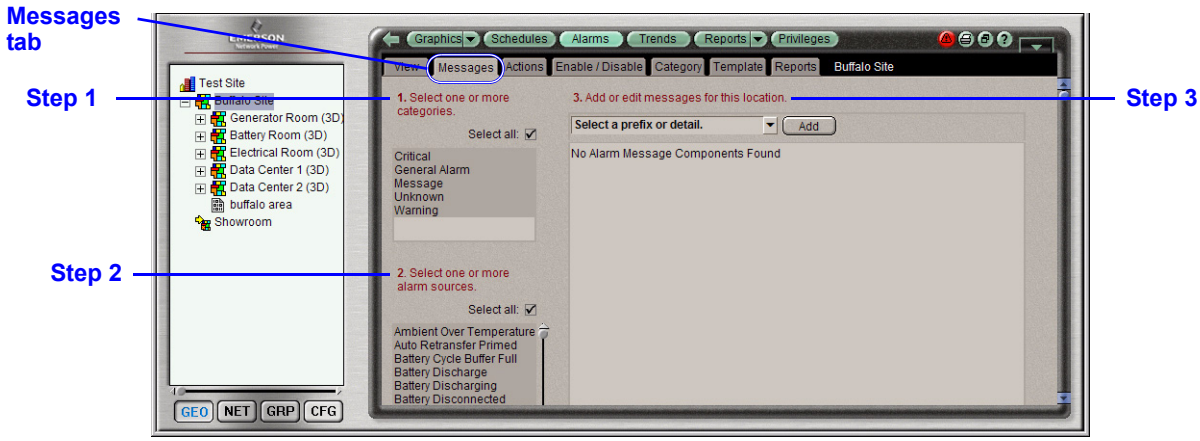
Prefix (optional)	Text	Details (optional)
Text at beginning of message	The alarm or return-to-normal	Text at end of message

This section describes how to add, change or delete the Prefix and Details portions of alarm messages.

Changes apply to the location in the tree where they are added and to all its subordinate members of the tree. For example, if you add Details at the system level to show the Acknowledge Time for alarms in a certain category, that will appear in all alarm message for any element in the system.

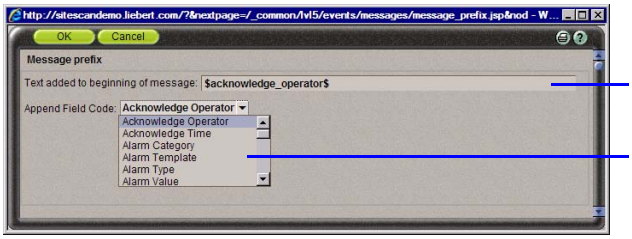
To access the Message functions:

- Click the **GEO** button, then click on an item in the tree at left.
- Click the **Alarms** button, then the **Messages** tab. Steps are listed in red, as shown below.



1. Select the categories that contain the alarm sources with messages you want to edit.
2. Select the alarm sources for the selected categories.
   Note: In **Steps 1** and **2**, control-click to select multiple items, or check the **Select All** box.
3. Click on the down arrow and select an option from the drop-down menu: **Add new prefix to beginning of message** or **Add new details to end of message**.

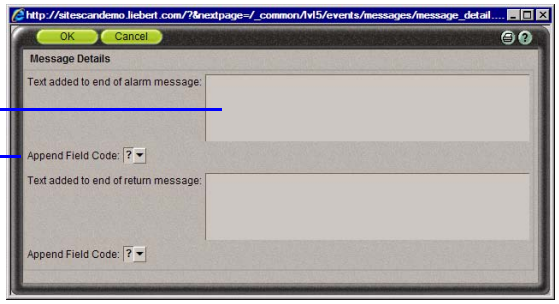
MESSAGE PREFIX



Text boxes

Field codes

MESSAGE DETAILS (END)



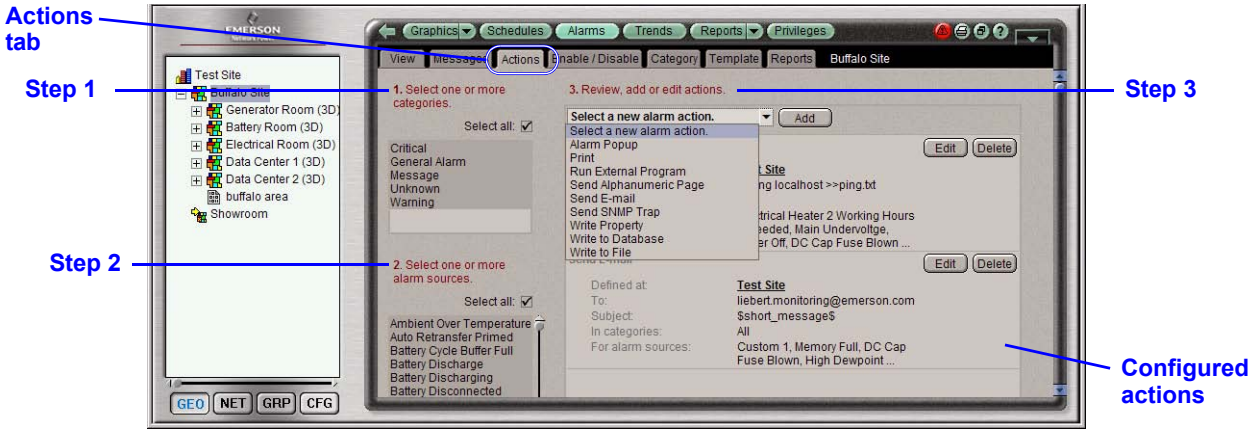
4. Click the **Add** button to open the appropriate window. The Message Details window, shown above right, allows you to make separate entries for alarms and return-to-normal events.
   - Type the text you want to add to the message in the text boxes.
   - To add a field code to a message, click the Append Field Code down arrow and select an option from the drop-down menu (see **Table 5** for definitions).
   - Click the **OK** button to save your changes (or click **Cancel** to close without saving).
5. The new Prefix or Details appears in the **Messages** tab window. Click the **Edit** button to make additional changes. Click **Delete** to remove the item.

8.4 Actions

Certain Liebert SiteScan Web features may be set up to protect valuable equipment, data and other assets by responding automatically to alarms in devices affected by such events as power failures, overheating and mechanical failures.

For example, if a cooling unit's performance becomes impaired, Liebert SiteScan Web may be set up to send e-mail alerts to various personnel, record data pertaining to the event and append it to a particular file and launch a command or batch file that can execute user-customized scripts.

- Click the **GEO** button, then click on an item in the tree at left.
- Click the **Alarms** button, then the **Actions** tab. Steps are listed in red, as shown below.



1. Select the categories that contain the alarm sources you want to set up.
2. Select the alarm sources for the selected categories.
   Note: In **Steps 1** and **2**, control-click to select multiple items, or check the **Select All** box.
3. To choose an action, click on the down arrow and select an option from the drop-down menu.
4. Click the **Add** button.
5. Proceed to the appropriate section to continue setting up the action.
   - **8.4.1 - Alarm Popup Action**
   - **8.4.2 - Print Action**
   - **8.4.3 - Run External Program Action**
   - **8.4.4 - Send Alphanumeric Page Action**
   - **8.4.5 - Send E-Mail Action**
   - **8.4.6 - Send SNMP Trap Action**
   - **8.4.7 - Write Property Action**
   - **8.4.8 - Write to Database Action**
   - **8.4.9 - Write to File Action**

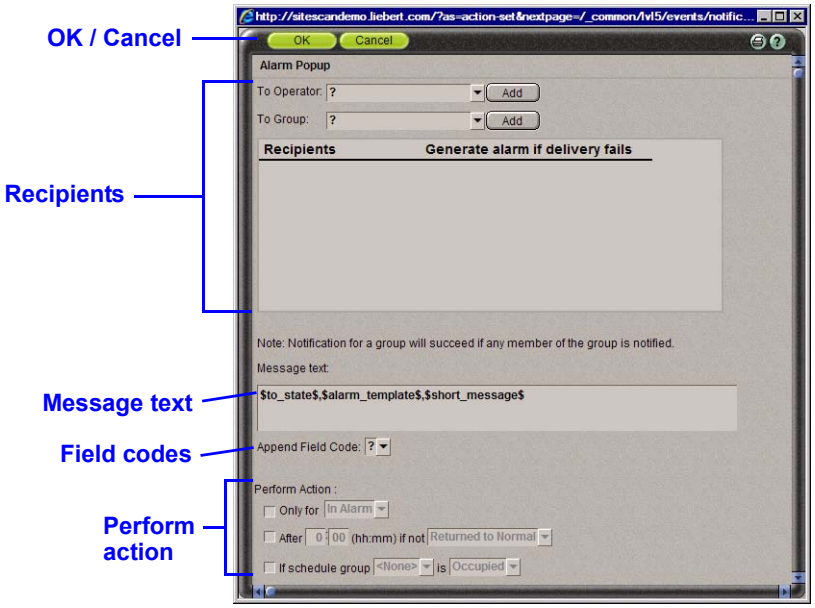
8.4.1 Alarm Popup Action

The Alarm Popup action sends an alert to designated recipients' computers when specified alarms occur. The alert pops up in a dialog box on each recipient's computer when an alarm occurs.

A recipient may be any networked computer running the Liebert SiteScan Web Alarm Popup application. Individuals and groups may be selected from a list set up via the CFG functions. For details on editing these lists, see **11.3.1 - Set Up Operators** and **11.3.2 - Create Operator Groups**.

Open the Alarm Popup window, shown below, to set up this action. To do this:

- Click the **GEO** button, then click on an item in the tree at left. When configured, the action will apply to the designated item in the tree as well as its subordinate items.
- Click the **Alarms** button, then the **Actions** tab. Perform **Steps 1**-**3** (see **8.4 - Actions**):
  - Select the alarm categories (**Step 1**) and alarm sources (**Step 2**) you want linked this action.
  - Select **Alarm Popup** from the drop-down menu (**Step 3**), then click **Add**.



- Specify the recipients who should receive notifications by clicking on the appropriate down arrow and selecting a name from the drop-down list:
  - Select an individual from the **To Operator** list, then click the **Add** button.
  - Select a group of operators from the **To Group** list, then click the **Add** button.
- Once added, the selected names appear in the Recipients list with a check box in the **Generate Alarm if Delivery Fails** column. Click to place a check mark (✔) to send a System Info alarm to the Liebert SiteScan Web server if the recipient is not running the Alarm Popup application when an alert is sent.
- In the Message Text box, enter the message as you want it to appear in the popup window, using the appropriate punctuation, including spaces and returns to separate lines of text.
- You can add dynamic alarm data to the text by selecting field codes from the Append Field Code list (see **Table 5** for definitions). To do this:
  - Place the cursor in the Message Text box where you want the data to appear.
  - Click on the Append Field Code down arrow, then select an option from the drop-down list.
- By default, the action will be performed both when an alarm is detected and after the device returns to normal. In the Perform Action section, you may specify when to run the action:
  - Only when the device is **In Alarm** or after **Return to Normal**.
  - After a specified time if not **Returned to Normal** or not **Acknowledged**.*
  - If a group with a specified schedule is **Occupied** (e.g., during work hours) or **Unoccupied**.*

  * *Available only with Advanced Alarming*
- When finished, click the **OK** button (or **Cancel** to close the window without saving your changes).

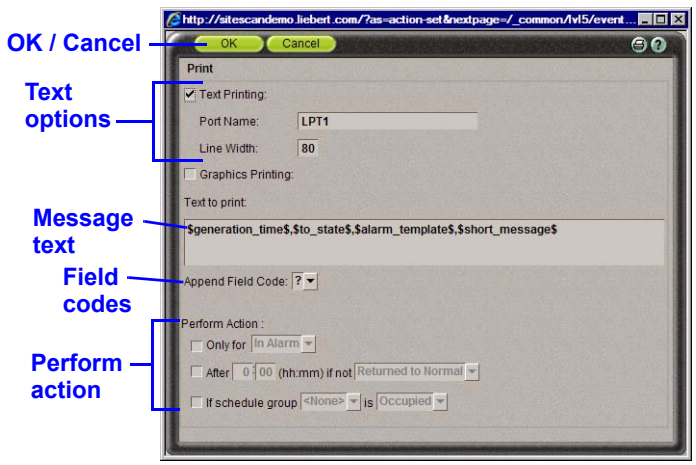
Once the action is set up, it appears in the **Actions** tab window. You may click the **Edit** button to make changes or the **Delete** button to remove it.

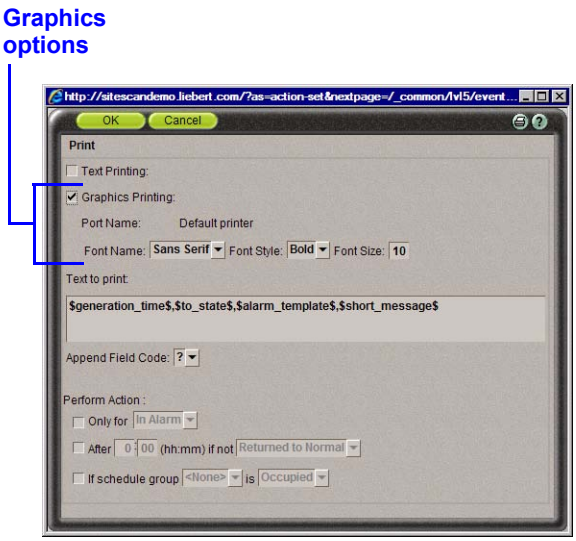
8.4.2 Print Action

The Print action sends an alert to a designated printer when a specified alarm occurs. The printed message may be sent to any printer connected to the server or a workstation on the network.

Open the Print window, shown below, to set up this action. To do this:

- Click the **GEO** button, then click on an item in the tree at left. When configured, the action will apply to the designated item in the tree as well as to its subordinate items.
- Click the **Alarms** button, then the **Actions** tab. Perform **Steps 1-3** (see **8.4 - Actions**):
  - Select the alarm categories (**Step 1**) and alarm sources (**Step 2**) you want linked this action.
  - Select **Print** from the drop-down menu (**Step 3**), then click **Add**.





- Click to place a check mark (✔) to choose a printing method based on the printer type:
  - Select **Text Printing** when using a dot matrix printer; this prints multiple alarms per page.
    Enter the designated name of the printer in the Printer Name box—for example, **LPT1**.
    Enter the maximum line width in the Line Width box.
  - Select **Graphics Printing** when using a laser printer; this prints one alarm per page.
    Click on the Font Name arrow and select the font: **Arial**, **Courier**, **Sans Serif** or **Times New Roman**.
    Click on the Font Style arrow and select a style: **Plain**, **Bold** or **Italics**.
    Enter the point size in the Font Size box—for example, **10** for 10-point type.
- In the Text to Print box, enter the message as you want it to appear, using the appropriate punctuation, including spaces and returns to separate lines of text.
- You can add dynamic alarm data to the text by selecting field codes from the Append Field Code list (see **Table 5** for definitions). To do this:
  - Place the cursor in the Text to Print box where you want the data to appear.
  - Click on the Append Field Code down arrow, then select an option from the drop-down list.
- By default, the action will be performed both when an alarm is detected and after the device returns to normal. In the Perform Action section, you may specify when to run the action:
  - Only when the device is **In Alarm** or after **Return to Normal**.
  - After a specified time if not **Returned to Normal** or not **Acknowledged**.*
  - If a group with a specified schedule is **Occupied** (e.g., during work hours) or **Unoccupied**.*

  * *Available only with Advanced Alarming*
- When finished, click the **OK** button (or **Cancel** to close the window without saving your changes).

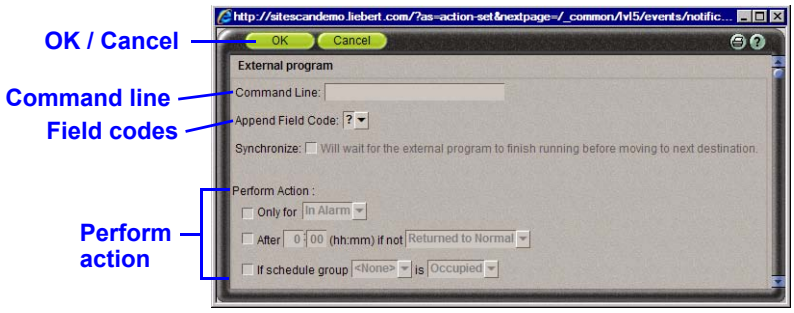
Once the action is set up, it appears in the **Actions** tab window. You may click the **Edit** button to make changes or the **Delete** button to remove it.

8.4.3 Run External Program Action

The Run External Program alarm action launches a script that starts a program or batch file on the server when an alarm is received.

Open the External Program window, shown below, to set up this action. To do this:

- Click the **GEO** button, then click on an item in the tree at left. When configured, the action will apply to the designated item in the tree as well as its subordinate items.
- Click the **Alarms** button, then the **Actions** tab. Perform **Steps 1-3** (see **8.4 - Actions**):
  - Select the alarm categories (**Step 1**) and alarm sources (**Step 2**) you want linked this action.
  - Select **Run External Program** from the drop-down menu (**Step 3**), then click **Add**.



- Enter the path of the executable file to be run followed by the path of the output file. For example:

  c:\windows\notepad.exe

  c:\SiteScan Web\output1.txt

  In the example, the program **Notepad** will be opened and a text file named **output1.txt** will be created in the **SiteScan Web** program folder on the server's **C: drive**
- Append Field Codes to the command line by choosing from the drop down list (see **Table 5** for definitions). More than one field code may be chosen. For example:

  c:\reports\run_report.bat $Generation_time$$To_State$

  This starts a batch file on the server and uses the alarm's **generation time** and **state** as values.
- Placing a check mark (✔) in the **Synchronize** box forces a delay until the external program has finished running before initiating the next **Run External Program** alarm action.
- By default, the action will be performed both when an alarm is detected and after the device returns to normal. In the Perform Action section, you may specify when to run the action:
  - Only when the device is **In Alarm** or after **Return to Normal**.
  - After a specified time if not **Returned to Normal** or not **Acknowledged**.*
  - If a group with a specified schedule is **Occupied** (e.g., during work hours) or **Unoccupied**.*

  * *Available only with Advanced Alarming*
- When finished, click the **OK** button (or **Cancel** to close the window without saving your changes).

Once the action is set up, it appears in the **Actions** tab window. You may click the **Edit** button to make changes or the **Delete** button to remove it.

8.4.4 Send Alphanumeric Page Action

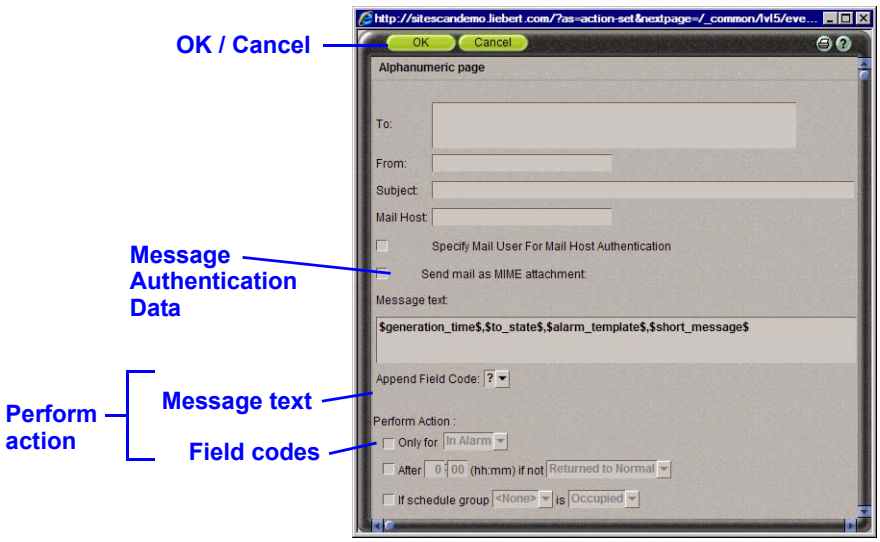
The Send Alphanumeric Page alarm action sends a page to one or more alphanumeric pagers or sends text messages to cell phones. The recipient's pager or phone must accept be able to accept e-mail.

Do not assign the Alphanumeric Page alarm action to frequently occurring alarms if you are using a stand-alone workstation. Sending pages for a frequently occurring alarm may dramatically slow down your system and cause problems with your mail server.

If the page will be sent over the Internet from a workstation that is not directly connected to the Internet, the workstation must first be configured to connect to the Internet automatically (see **Set Up a Dial-Up Networking Connection on page 27**).

Open the Alphanumeric Page window, shown below, to set up this action. To do this:

- Click the **GEO** button, then click on an item in the tree at left. When configured, the action will apply to the designated item in the tree as well as its subordinate items.
- Click the **Alarms** button, then the **Actions** tab. Perform **Steps 1**-**3** (see **8.4 - Actions**):
  - Select the alarm categories (**Step 1**) and alarm sources (**Step 2**) you want linked this action.
  - Select **Send Alphanumeric Page** from the drop-down menu (**Step 3**), then click **Add**.



- In the **To** box, enter the service provider's phone number in this format: 1 800-555-1212. Do not use parentheses around the area code. More than one recipient may be specified.
- Enter a valid address, if required by your mail server, in the **From** box.
- Enter a subject of the notification in the **Subject** box.
- Enter your Simple Main Transfer Protocol in the **Mail Host** box. This can be either an IP address or a system name, such as *mail.mycompany.com*.
- If your mail server requires a user name and password, put a check mark (✔) in the **Specify Mail User** box. This opens the **Mail User** and **Password** boxes to accept the information.
- Put a check mark (✔) in the **Send mail as MIME attachment** box if your mail server allows only MIME attachments.
- Compose a message to be sent in the **Message Text** box, using punctuation, spaces and returns to format the text.
- Add live data to the message by selecting field codes from the **Append Field Code** list (see **Table 5** for definitions).
- By default, the action will be performed both when an alarm is detected and after the device returns to normal. In the Perform Action section, you may specify when to run the action:
  - Only when the device is **In Alarm** or after **Return to Normal**.
  - After a specified time if not **Returned to Normal** or not **Acknowledged**.*
  - If a group with a specified schedule is **Occupied** (e.g., during work hours) or **Unoccupied**.*

  * *Available only with Advanced Alarming*
- When finished, click the **OK** button (or **Cancel** to close the window without saving your changes).

Once the action is set up, it appears in the **Actions** tab window. You may click the **Edit** button to make changes or the **Delete** button to remove it.

Set Up a Dial-Up Networking Connection

A dial-up networking connection must be set up if the page will be sent over the Internet from a workstation that is not directly connected to the Internet. This enables SiteScan Web to dial out to send an e-mail or alphanumeric page. After creating and executing an alarm action, the modem should dial automatically, then hang up after a minute of inactivity.

- Set up your server and modem to dial the default connection to your Internet Service Provider. See your server and modem documentation.
- Connect to the Internet and enter your Internet Service Provider's name and phone number, then your user name and password. Your modem must be detected before you can configure your Internet account connection.
- Type the following line at the end of the **system.properties** file in your system directory:
  repactions.connection.name=<name of connection>

8.4.5 Send E-Mail Action

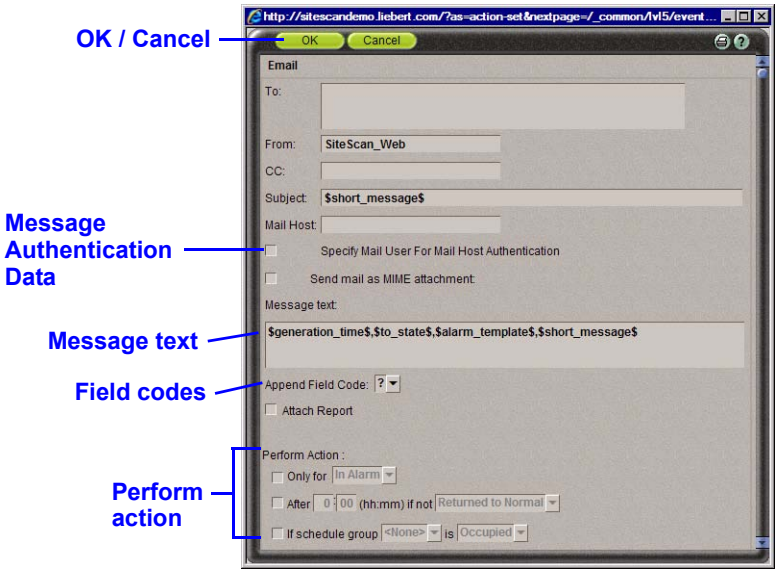
Use the Send E-Mail action to send customized e-mail messages to selected recipients when an alarm occurs.

Do not assign the Send E-Mail alarm action to frequently occurring alarms if you are using a stand-alone workstation. Sending pages for a frequently occurring alarm may dramatically slow down your system and cause problems with your mail server.

If the e-mail will be sent from a workstation that is not directly connected to the Internet, the workstation must first be configured to connect to the Internet automatically (see **Set Up a Dial-Up Networking Connection on page 27**).

Open the Email window, shown below, to set up this action. To do this:

- Click the **GEO** button, then click on an item in the tree at left. When configured, the action will apply to the designated item in the tree as well as its subordinate items.
- Click the **Alarms** button, then the **Actions** tab. Perform **Steps 1-3** (see **8.4 - Actions**):
  - Select the alarm categories (**Step 1**) and alarm sources (**Step 2**) you want linked this action.
  - Select **Send E-Mail** from the drop-down menu (**Step 3**), then click **Add**.



- In the **To** box, enter the recipient's e-mail address. More than one recipient may be specified.
- Enter a valid address, if required by your mail server, in the **From** box.
- Enter a subject for the e-mail notification in the **Subject** box.
- Enter your Simple Main Transfer Protocol in the **Mail Host** box. This can be either an IP address or a system name, such as mail.mycompany.com.
- If your mail server requires a user name and password, put a check mark (✔) in the **Specify Mail User** box. This opens the **Mail User** and **Password** boxes to accept the information.
- Put a check mark (✔) in the **Send mail as MIME attachment** box if your mail server allows only MIME attachments.
- Compose a message to be sent in the **Message Text** box, using punctuation, spaces and returns to format the text.
- Add live data to the message by selecting field codes from the **Append Field Code** list (see **Table 5** for definitions).
- By default, the action will be performed both when an alarm is detected and after the device returns to normal. In the Perform Action section, you may specify when to run the action:
  - Only when the device is **In Alarm** or after **Return to Normal**.
  - After a specified time if not **Returned to Normal** or not **Acknowledged**.*
  - If a group with a specified schedule is **Occupied** (e.g., during work hours) or **Unoccupied**.*

  * *Available only with Advanced Alarming*
- When finished, click the **OK** button (or **Cancel** to close the window without saving your changes).

8.4.6 Send SNMP Trap Action

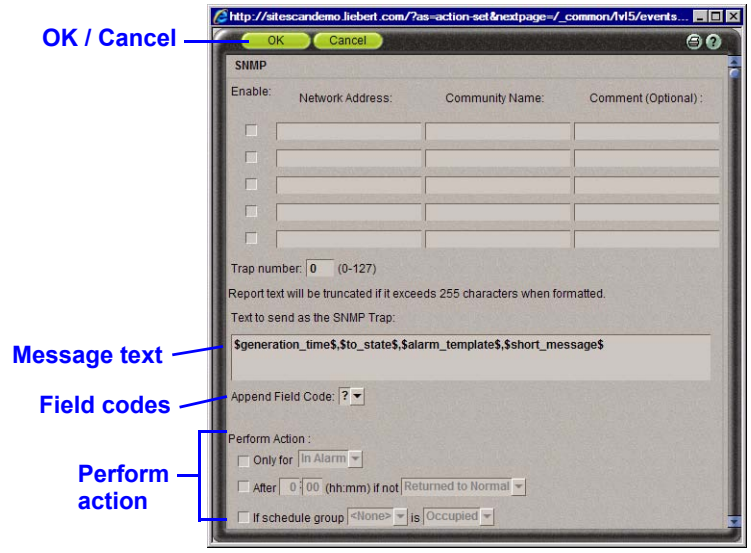
The Send SNMP Trap alarm action sends an SNMP trap in response to receiving an alarm. Traps contain the text created in the Text to send as the SNMP Trap field in the alarm action dialog box. You can configure up to five SNMP servers to receive traps.

Liebert SiteScan Web supports SNMP v1.

Each SNMP server chosen to receive these traps must have SNMP monitoring equipment installed. If problems arise with your SNMP connection or receiving traps, contact your information services department.

To set up this action, open the SNMP window, shown below. To do this:

- Click the **GEO** button, then click on an item in the tree at left. When configured, the action will apply to the designated item in the tree as well as its subordinate items.
- Click the **Alarms** button, then the **Actions** tab. Perform **Steps 1-3** (see **8.4 - Actions**):
  - Select the alarm categories (**Step 1**) and alarm sources (**Step 2**) you want linked this action.
  - Select **Send SNMP Trap** from the drop-down menu (**Step 3**), then click **Add**.



- Put a check mark (✔) in the **Enable** box and enter the SNMP server's network address community name in the appropriate boxes. Obtain this information from your network administrator.

  Deleting the check mark (✔) from an **Enable** box removes the attendant address from the SNMP trap notification.

  The **Comment (optional)** field may be used for the location of the SNMP server.
- **Trap number** box accepts a numeral from 1 to 127 to identify a message from this alarm action. This featured is used if trap numbers have been configured. Obtain this information from your network administrator. The same trap number is used for all messages from this alarm action.
- The **Text to send as the SNMP Trap** box will accept up to 255 characters. Longer messages will be truncated.

  Use punctuation, spaces and returns to format the message. You may customize the message by selecting field codes from the **Append Field Code** list (see **Table 5** for definitions).
- By default, the action will be performed both when an alarm is detected and after the device returns to normal. In the Perform Action section, you may specify when to run the action:
  - Only when the device is **In Alarm** or after **Return to Normal**.
  - After a specified time if not **Returned to Normal** or not **Acknowledged**.*
  - If a group with a specified schedule is **Occupied** (e.g., during work hours) or **Unoccupied**.*

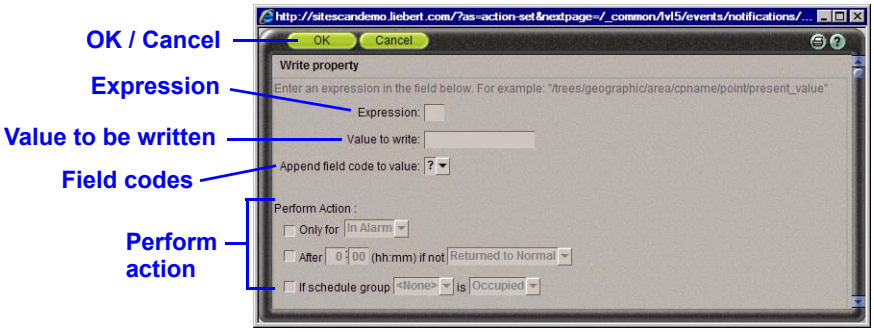
  * *Available only with Advanced Alarming*
- When finished, click the **OK** button (or **Cancel** to close the window without saving your changes).

8.4.7 Write Property Action

The **Write Property** alarm action updates a microblock property value.

Open the Write Property window, shown below, to set up this action. To do this:

- Click the **GEO** button, then click on an item in the tree at left. When configured, the action will apply to the designated item in the tree as well as its subordinate items.
- Click the **Alarms** button, then the **Actions** tab. Perform **Steps 1-3** (see **8.4 - Actions**):
  - Select the alarm categories (**Step 1**) and alarm sources (**Step 2**) you want linked this action.
  - Select **Write Property** from the drop-down menu (**Step 3**), then click **Add**.



- In the **Expression** box, enter the microblock value that you want to update.
- In the **Value to Write** box, type the value you want to write to the microblock property. For a binary property, type **0** or **1**.
- Select field codes from the drop-down list to add to the Value to Write field.
- By default, the action will be performed both when an alarm is detected and after the device returns to normal. In the Perform Action section, you may specify when to run the action:
  - Only when the device is **In Alarm** or after **Return to Normal**.
  - After a specified time if not **Returned to Normal** or not **Acknowledged**.*
  - If a group with a specified schedule is **Occupied** (e.g., during work hours) or **Unoccupied**.*

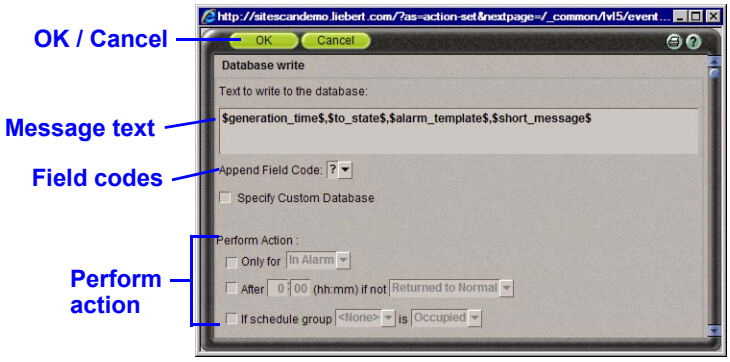
  * *Available only with Advanced Alarming*
- When finished, click the **OK** button (or **Cancel** to close the window without saving your changes).

8.4.8 Write to Database Action

The **Write to Database** alarm action stores alarm information in a table in the Liebert SiteScan Web alarm database or in a custom database. Third-party applications can access the alarm information for building maintenance management or alarm analysis. For example, an application can perform such actions as triggering a stored procedure or running a report.

Open the Database Write window, shown below, to set up this action. To do this:

- Click the **GEO** button, then click on an item in the tree at left. When configured, the action will apply to the designated item in the tree as well as its subordinate items.
- Click the **Alarms** button, then the **Actions** tab. Perform **Steps 1**-**3** (see **8.4 - Actions**):
  - Select the alarm categories (**Step 1**) and alarm sources (**Step 2**) you want linked this action.
  - Select **Write to Database** from the drop-down menu (**Step 3**), then click **Add**.



Writing to the Liebert SiteScan Web Alarm Database

When you add the **Write to Database** alarm action, by default Liebert SiteScan Web writes alarm information to the **write_db_ra** table in the alarm database. The following table describes the information that SiteScan Web writes to the database and gives the column name and data type you will need in order to access the alarm information from a third-party application.

Description	Column Name	Data type
Alarm generation time	EVENT_TIME_	Datestamp
Reference name path to the alarm source Example: #slm/m073	SOURCE_PATH_	String
Display name path to the alarm source Example: Atlanta Office/R&D Facility/Second Floor/VAV 2-1/Zone Temp	DISPLAY_NAME_	String
Alarm state Example: OFF NORMAL, LOW LIMIT, HIGH LIMIT	EVENT_STATE_	String
Alarm text as defined in the Text to write to the database field on the alarm action page. You can add live data to the text by selecting field codes from the **Append Field Code** list (see **Table 5** for definitions).	RA_TEXT_	String

To keep the database table from growing too large, you must delete old entries using a third-party database application. You cannot view, edit or delete entries from SiteScan Web.

NOTE

If your system uses an Access or MSDE database, you cannot open the database in a third-party application while Liebert SiteScan Web or SiteBuilder is running.

Writing to a Custom Database

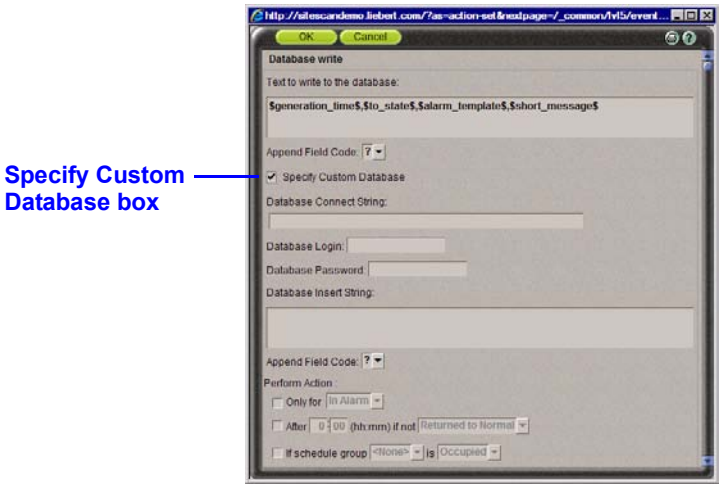
Liebert SiteScan Web can write alarm information to the following types of custom databases. The custom database does not have to be the same type as the Liebert SiteScan Web database.

- SQL Server
- MySQL
- PostgreSQL
- Oracle

You may create a table in an existing, third-party database or create a new database.

Using your database management tool, create a table in your custom database that includes fields for each alarm field code to be written to the table. Each field length in the table should be as long as the longest value to be written to that field.

To set up Liebert SiteScan Web to write to a custom database instead of to the Liebert SiteScan Web alarm database, select the **Specify Custom Database** check box on the Alarms page Actions tab, shown below, This reveals fields specifying how Liebert SiteScan Web writes to the database.



To enter the required information, refer to the following table.

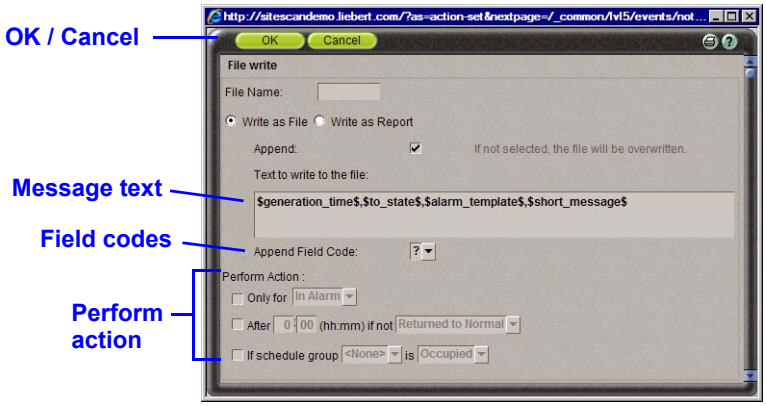
Field	Notes	
Text to write to the database	The text is made up of field codes that add live data to the text. You can select additional field codes from the Append Field Code list (see **Table 5** for definitions). NOTE: To write the text in this field to the custom database, you must include the Report Text field code ($report_text$) in the **Database Insert String** field described below.	
Database Connect String	**For database type:** SQL Server MySQL PostgreSQL Oracle	**The connect string format is...** jdbc:odbc:*<odbc_alias>* jdbc:mysql://*<host>:<port>/<instance>* jdbc:postgresql://*<host>:<port>/<instance>* jdbc:oracle:thin@*<host>:<port>/<instance>* where: *<host>* is the database server name/IP address *<port>* is the port number for the database *<instance>* is the database name in the database server *<odbc_alias>* is the name of the ODBC data source
Database Login and Password	The login and password to connect to the database.	
Database Insert String	Use the following format: Insert into <TABLE_NAME> (<column1_name>, <column2_name> ...) values (<$field_code1$>, <$field_code2$>, ...) Example: Insert into SiteScan Web_ALARMS (TIME_, LOCATION_, TO_STATE_, TEXT_) values ($generation_time$, $location_path$, to_state, $report_text$) NOTE: You can add field codes to the Insert String using the Append Field Code list. If you add a timestamp type field code (for example, $generation_time$), you should have the data go into a timestamp data type field in the custom database. Otherwise, you must use field code formatting to format the time.	

8.4.9 Write to File Action

The Write to File action allows you to record alarm information in a file.

Open the File Write window, shown below, to set up this action. To do this:

- Click the **GEO** button, then click on an item in the tree at left. When configured, the action will apply to the designated item in the tree as well as its subordinate items.
- Click the **Alarms** button, then the **Actions** tab. Perform **Steps 1-3** (see **8.4 - Actions**):
  - Select the alarm categories (**Step 1**) and alarm sources (**Step 2**) you want linked this action.
  - Select **Write to File** from the drop-down menu (**Step 3**), then click **Add**.



- Enter a name in the File Name box.
- Choose either **Write to File** or **Write as Report**.
- Click to place a check mark (✔) in the Append box to add new entries at the end of the file.
  Note: If you do not check the Append box, the file contents will be overwritten with each new alarm message.
- In the Text to Write to the File box, enter the message as you want it to appear, using the appropriate punctuation, including spaces and returns to separate lines of text.
- You can add dynamic alarm data to the text by selecting field codes from the Append Field Code list (see **Table 5** for definitions). To do this:
  - Place the cursor in the Text to Write to the File box where you want the data to appear.
  - Click on the Append Field Code down arrow, then select an option from the drop-down list.
- By default, the action will be performed both when an alarm is detected and after the device returns to normal. In the Perform Action section, you may specify when to run the action:
  - Only when the device is **In Alarm** or after **Return to Normal**.
  - After a specified time if not **Returned to Normal** or not **Acknowledged**.*
  - If a group with a specified schedule is **Occupied** (e.g., during work hours) or **Unoccupied**.*

  * *Available only with Advanced Alarming*
- When finished, click the **OK** button (or **Cancel** to close the window without saving your changes).

Once the action is set up, it appears in the **Actions** tab window. You may click the **Edit** button to make changes or the **Delete** button to remove it.

8.4.10 Field Code Definitions

Table 5 shows the field codes displayed in Action and Messages windows.

Table 5 Field code definitions

Field Code Name	Field Code	Definition
Acknowledge Operator	$acknowledge_operator$	The operator who acknowledged the alarm.
Acknowledge Time	$acknowledge_time$	The time when the operator acknowledged the alarm.
Alarm Category	$event_category$	The alarm category that the alarm is assigned to.
Alarm Template	$event_template$	The alarm template that the alarm is assigned to.
Alarm Type	$event_type$	The alarm type of the alarm source; for example, CHANGE OF VALUE, CHANGE OF STATE.
Alarm Value	$alarm_value$	The alarm value.
Alert Text	$alerttext$	For a converted SuperVision system if the option **Create a single alarm template...** was selected during upgrade. Retrieves alarm message text from **cmnet_alert_text.properties**.
		To use this field code:
		1. Select the **Alert Text** field code.
		2. After $alerttext, type one of the following:
		:normalshort
		:normallong
		:alarmshort
		:alarmlong
		For example, $alerttext:alarmlong$
Character	c	A single ASCII character. Often used for form feeds and other printer escape sequences. For example, $C:65$ displays A.
Command Value	$command_value$	The commanded value from the alarm source. Valid only for alarm type COMMAND FAILURE.
Dead Band	$deadband$	The deadband value from the alarm source. Valid only for alarm type OUT-OF-RANGE.
Deletion Operator	$deletion_operator$	The operator who deleted the alarm.
Deletion Time	$deletion_time$	The time the alarm was deleted.
Device	$device$	The display name of the device where the alarm came from.
Equipment	$equipment$	The display name of the equipment where the alarm came from.
Error Limit	$error_limit$	The error limit, from the alarm source. Valid only for alarm type FLOATING LIMIT.
Exceeded Limit	$exceed_limit$	The exceeded limit value from the alarm source. Valid only for alarm type OUT-OF-RANGE.
Exceeding Value	$exceeding_value$	The exceeding value from the alarm source. Valid only for alarm type OUT-OF-RANGE.
Fault	$fault$	The status of the fault condition from the alarm source.
Feedback Value	$feedback_value$	The feedback value from the alarm source. Valid only for alarm type COMMAND FAILURE.
Field Message	$field_message$	Additional text recorded in the alarm by the device.
From State	$from_state$	The previous state of the alarm source.
Generation Operator	$generation_operator$	The operator who forced the alarm to return to normal.
Generation Time	$generation_time$	The time in the module when the alarm was generated.
In Alarm	in_alarm	The in alarm status from the alarm source.
Incident Closed Time	$incident_closed_time$	The time the alarm's entire incident group closed.

Table 5 Field code definitions

Field Code Name	Field Code	Definition
Latched Data Value (Analog)	$latched_data_analog:x$	“x” ranges from 1 to 5. The display name of the alarm source that generated the alarm.
Latched Data Value (Digital)	$latched_data_digital:x$	“x” ranges from 1 to 5. The display name of the alarm source that generated the alarm.
Location Path	$location_path$	Displays all the path display names from root to source.
Long Message	$long_message$	The formatted alarm long text displayed by double-clicking the alarm on the Alarms page.
Message Details	$message_details$	The message details displayed on the Alarms page **View** tab.
Message Prefix	$message_prefix$	The message prefix displayed on the Alarms page **View** tab.
Message Text	$message_text$	The message text displayed on the Alarms page **View** tab.
New State	new_state	The status of new state from the alarm source.
New Value	new_value	The new value from the alarm source. Valid only for alarm type CHANGE OF VALUE.
Object ID	$object_ID$	Object ID of the alarm source.
Out of Service	$out_of_service$	The status of 'out of service' from the alarm source.
Overridden	$overridden$	The status of 'overridden' from the alarm source.
Program ID	$program_id$	The address of the control program that generated the alarm. BACnet program address format: device ID, program number (example: 240219,5) SuperVision program address format: site, gateway, module, fb (example: 1, 2, 13, 5)
Receive Time	$receive_time$	The time at the workstation when the alarm was received.
Recipient Device ID	$device_id$	The device ID of the device where the alarm came from.
Record Type	$record_type$	The type of alarm; for example, BACnet, SuperVision, System.
Reference Path	$reference_path$	Path to alarm source. Available in all alarm actions.
Reference Value	$reference_value$	The 'reference value' from the alarm source. Valid only for alarm type FLOATING LIMIT.
Referenced Bitstring	$referenced_bitstring$	The value of the 'referenced bitstring' value from the alarm source. Valid only for alarm type CHANGE OF BITSTRING.
Report Text	$report_text$	Used only with the **Write to Database** alarm action. You must include this field code in the **Database Insert String**.
RTN Time	RTN_time	The time when the alarm returned to normal.
Setpoint Value	$setpoint_value$	The 'setpoint value' from the alarm source. Valid only for alarm type FLOATING LIMIT.
Short Message	$short_message$	The formatted alarm short text.
Site	$site$	The display name of the site the alarm came from.
Source	$source$	The display name of the alarm source that generated the alarm.
Source description	$source:description$	The description of the alarm source that generated the alarm.
Source Path	$source:<path>$	For advanced users, displays the database item indicated by <path> relative to the alarm source; for example, <path> = ~equipment.display-name. The easiest way to display the path is to use Global Modify.
System Directory	$system_dir$	The system folder name.
To State	to_state	The current state of the alarm source; for example, Normal, Fault, Off-normal, High limit, Low limit.

8.5 Enable/Disable

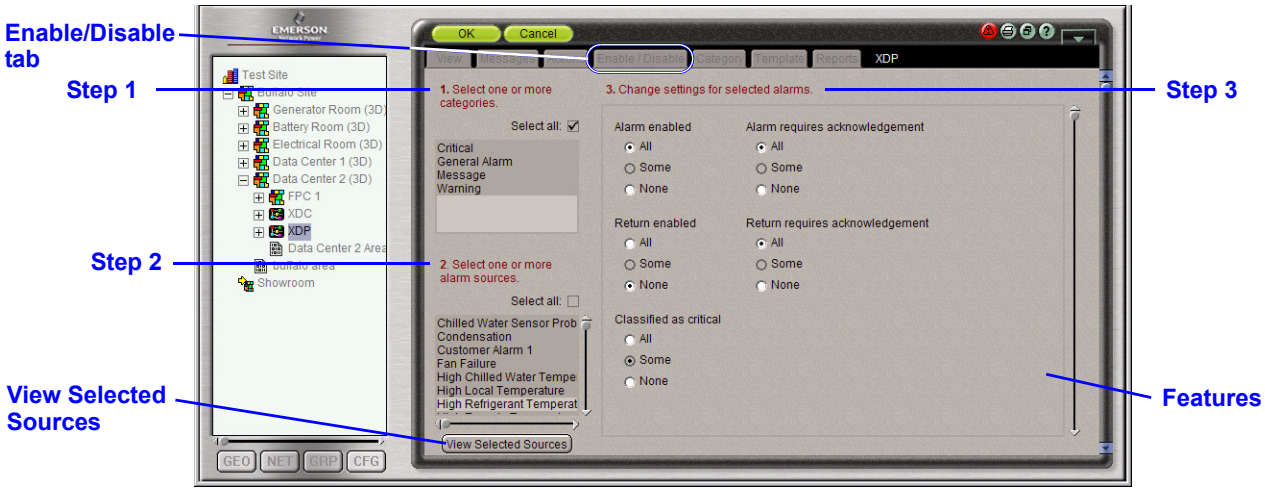
The **Enable/Disable** tab in the Alarms window allows you to customize the treatment of alarms and return-to-normal events for selected alarm sources. Through this function, you may:

- Activate or deactivate alarms and return-to-normal events
- Classify alarms as critical or non-critical
- Specify whether an operator must acknowledge alarms and return-to-normal events

8.5.1 Enable or Disable Features

To access the Enable/Disable functions:

- Click the **GEO** button, then click on an item in the tree at left.
- Click the **Alarms** button, then the **Enable/Disable** tab. Steps are listed in red, as shown below.



1. Select the categories that contain the alarm sources you want to set up.
2. Select the alarm sources for the selected categories.
   Note: In **Steps 1** and **2**, control-click to select multiple items, or check the **Select All** box.
3. To change settings for the selected alarm sources, click on the **All** or **None** radio button for each of the following features:

Feature	If you click **All** to enable this feature, Liebert SiteScan Web:
• **Alarm enabled**	Generates an alarm when specified conditions occur in the alarm source.
• **Return enabled**	Generates a return-to-normal when the alarm source returns to a normal state.
• **Classified as critical** *	Changes the system-wide alarm button to red when an alarm occurs. Critical alarms that pass through a modem are delivered to the Liebert SiteScan Web server immediately.
• **Alarm requires acknowledgement**	Requires that an operator acknowledge the alarm.
• **Return requires acknowledgement**	Requires that an operator acknowledge the return-to-normal event.

* Note: If the **Classified as critical** feature is disabled (**None** button selected), Liebert SiteScan Web changes the system-wide alarm button to yellow when an alarm occurs. Non-critical alarms that pass through a modem are stored in the gateway until one of the following happens:

- A critical alarm occurs.
- The gateway is contacted by Liebert SiteScan Web.
- The gateway buffer is full, at which time all alarms are sent to Liebert SiteScan Web.

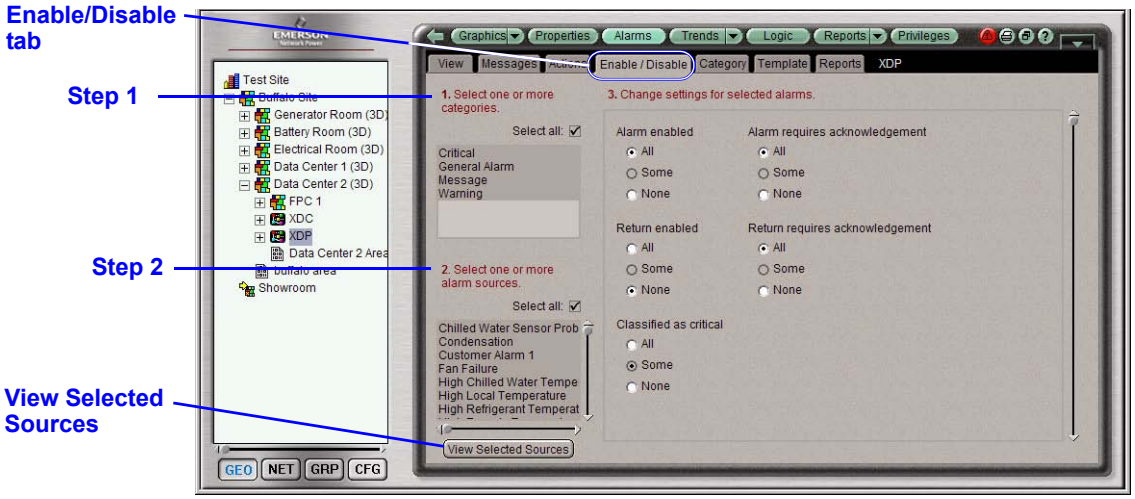
- When finished, click the **OK** button (or **Cancel** to close the window without saving your changes).

8.5.2 View Selected Sources

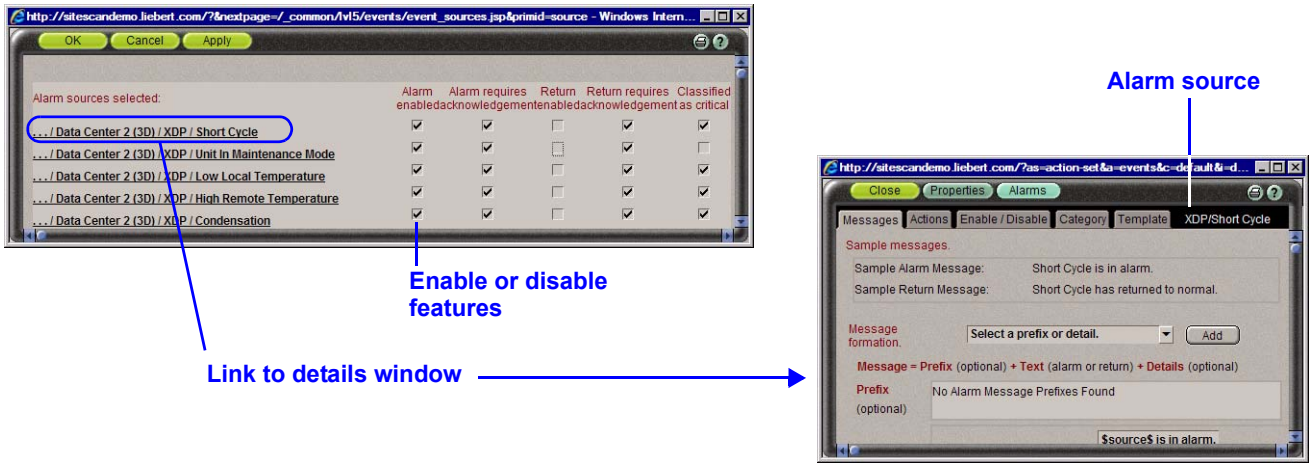
In the **Enable/Disable** tab, you may use the **View Selected Sources** button to view a listing of all selected alarm sources in a dialog box where you may enable or disable features for any source.

To access the Enable/Disable functions:

- Click the **GEO** button, then click on an item in the tree at left.
- Click the **Alarms** button, then the **Enable/Disable** tab. Steps are listed in red, as shown below.



- In the **Enable/Disable** tab window:
  1. Select the categories that contain the alarm sources you want to view.
  2. Select the alarm sources for the selected categories.
     Note: In **Steps 1** and **2**, control-click to select multiple items, or check the **Select All** box.
  3. Click the **View Selected Sources** button.
- A dialog box appears, listing all selected alarm sources with check boxes for enabled features, as shown below left. Use the scroll bar as needed to view additional sources.
- To enable a feature, click to place a check mark (✔) in the box. To disable a feature, click to remove the check mark.
- When finished, click **OK** (or **Cancel** to close the window without saving your changes).
- You may click on an alarm source to open a details window, below right. The name of the alarm source appears to the right of the tabs. Click the **Close** button to return to the previous view.



8.6 Category

The **Category** tab in the Alarms window allows you to customize alarm categories, which are groups of related alarm sources and their alarms.

Alarm categories let you perform tasks on groups of alarms, for example:

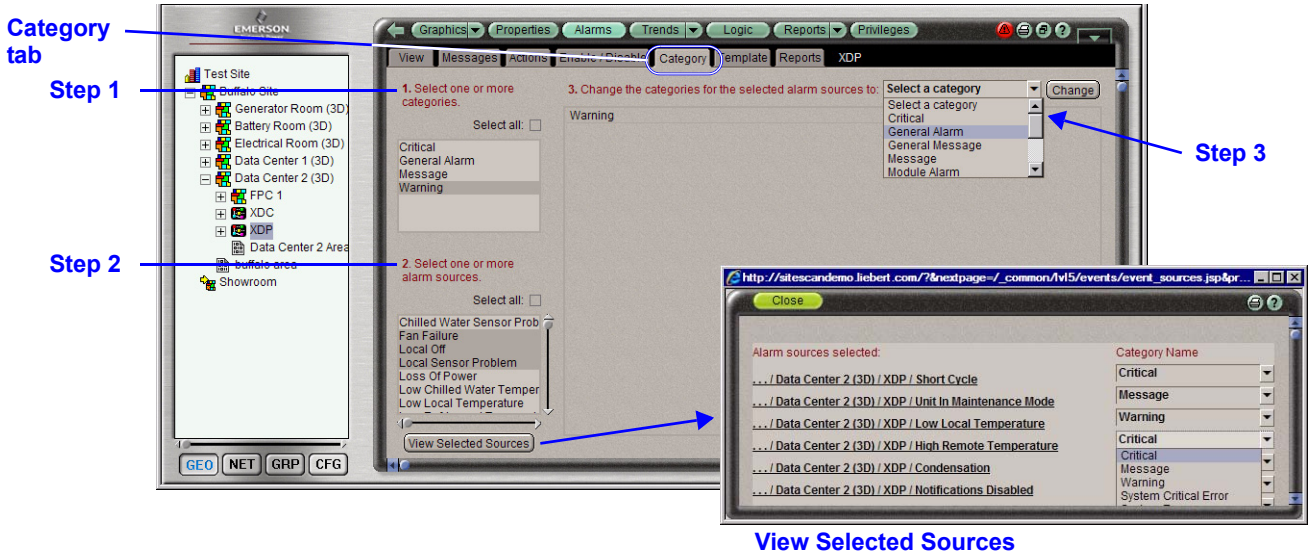
- View, acknowledge, or delete selected categories of alarms
- Assign alarm actions to selected categories of alarm sources
- Set up alarm sources in selected categories

Each alarm source is assigned to an alarm category, but you can change the category assignment in this window.

Liebert SiteScan Web has default alarm categories, but you can also create custom categories, if needed. (To do this, click the **CFG** button, open the **Categories** folder in the tree and click on **Alarm**. See the online help for more information.)

To access the Category functions:

- Click the **GEO** button, then click on an item in the tree at left.
- Click the **Alarms** button, then the **Category** tab. Steps are listed in red, as shown below.



1. Select the categories that contain the alarm sources you want to customize.
2. Select the alarm sources for the selected categories.
   Note: In **Steps 1** and **2**, control-click to select multiple items, or check the **Select All** box.
3. To assign a different category for the selected alarm sources:
   - Click on the drop-down menu and choose a category from the list.
   - Click the **Change** button.

- Click the **View Selected Sources** button to open a window showing the selected items, above right. Each source has a link to a details window and shows the category currently assigned.
- When finished, click the **OK** button (or **Cancel** to close the window without saving your changes).

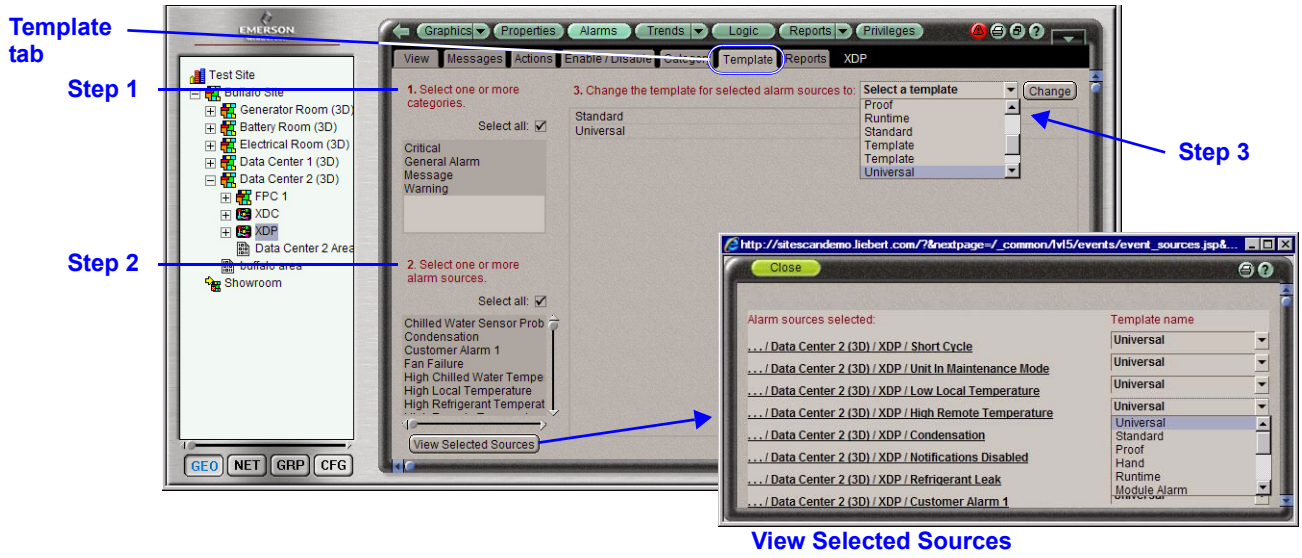
8.7 Template

All alarms in Liebert SiteScan Web v2.5 and later use one template called **Universal**. This template lets you define your alarm message text, the critical setting and the required acknowledgements at the alarm source.

If you upgraded your system from v2.0 or earlier, the alarm sources retained their existing templates and existing alarm settings. If the existing alarm sources contain little or no customization to the alarm settings, Emerson recommends that you change all of the alarms to use the Universal template. If the alarm sources had customized alarm settings, continue using the existing templates.

To assign a different template to alarm sources:

- Click the **GEO** button, then click on an item in the tree at left.
- Click the **Alarms** button, then the **Template** tab. Steps are listed in red, as shown below.



1. Select the categories that contain the alarm sources for which you want to change the template.
2. Select the alarm sources for the selected categories.
   Note: In **Steps 1** and **2**, control-click to select multiple items, or check the **Select All** box.
3. To assign a different template for the selected alarm sources:
   - Click on the drop-down menu and choose a template from the list.
   - Click the **Change** button.

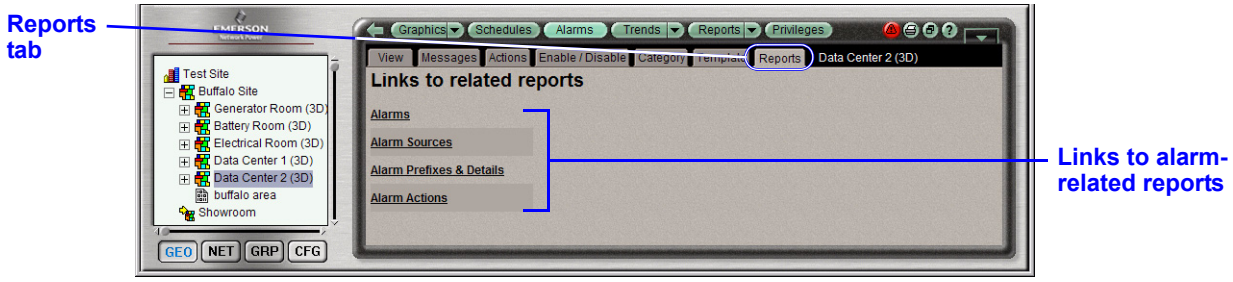
- Click the **View Selected Sources** button to open a window showing the selected items, above right. Each source has a link to a details window and shows the currently assigned template.
- When finished, click the **OK** button (or **Cancel** to close the window without saving your changes).

8.8 Alarm Reports

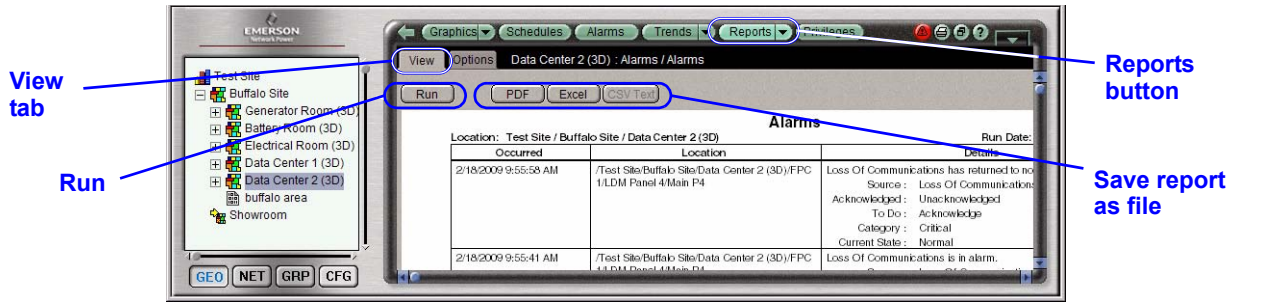
The **Reports** tab in the Alarms window offers quick access to all alarm-related reports. These reports are also accessible from the **Reports** menu action button (see **10.0 - Viewing Reports**).

To access reports from the Alarms window:

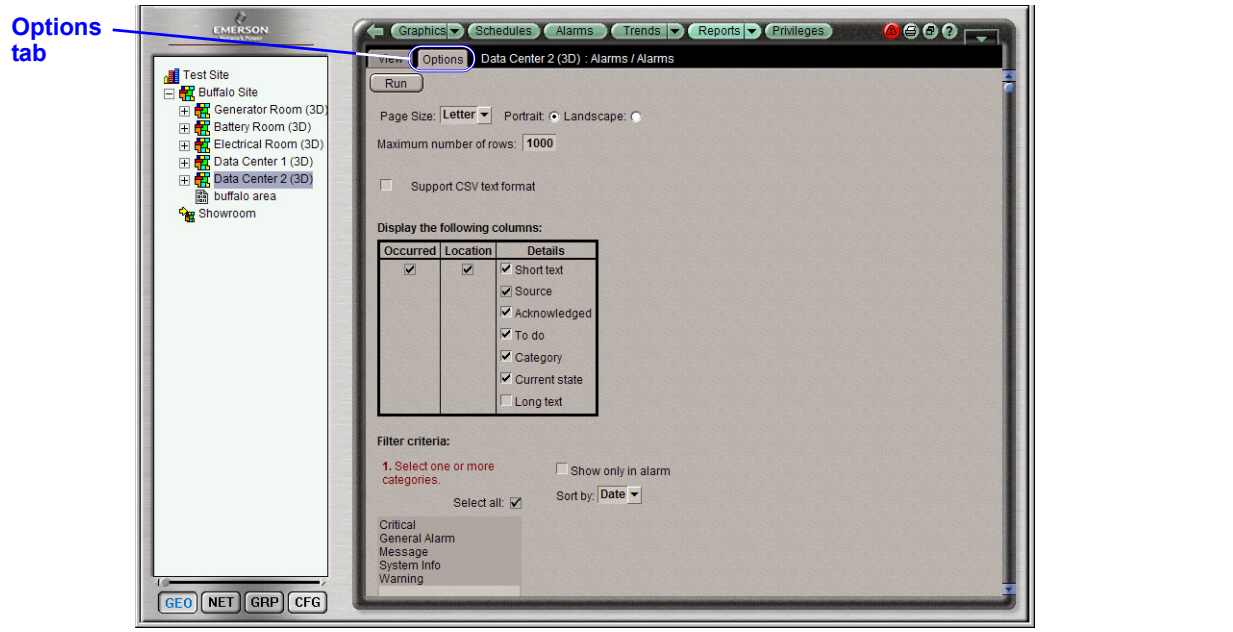
- Click the **GEO** button, then click on an item in the tree at left.
- Click the **Alarms** button, then the **Reports** tab.



- Click on a link to any of the alarm-related reports you want to view. The Reports window opens, as shown below, with the **Reports** button highlighted.
- If needed, click the **View** tab, then click the **Run** button to generate the report. When the report is displayed, you may copy the contents to a file by clicking the **PDF**, **Excel** or **CSV Text** button. See **10.2 - View Reports** for details about this window.



- Click the **Options** tab to view or change the report settings. See **10.3 - Set Up Report Options** for details about this window.



9.0 VIEWING TRENDS

The Trends button allows you to create trend graphs that may be viewed, printed or copied to a spreadsheet program. Liebert SiteScan Web can read and store equipment status values over time and then display this information in a graph to help you monitor the equipment's operation.

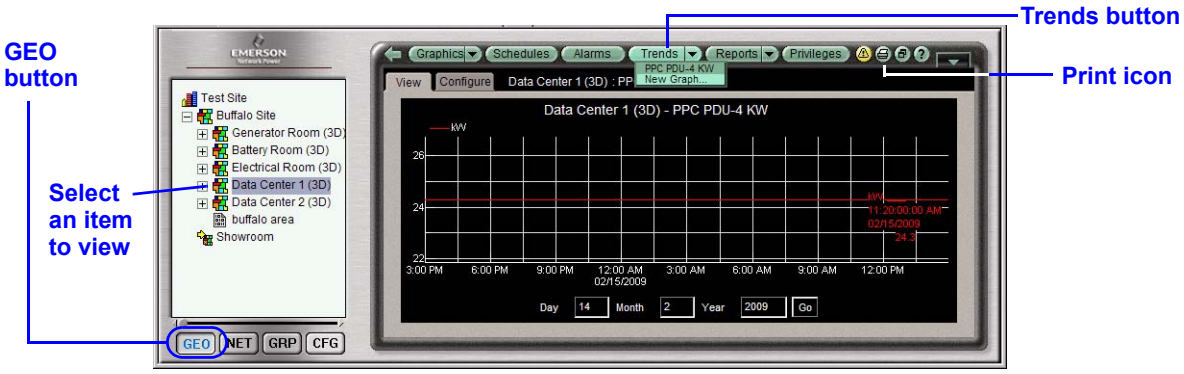
Trend data can be collected for any BACnet input or output point. The control module reads values for a point at intervals that you define and then stores that data in the module.

Because a control module has limited memory for storing trend data, you can set up historical trending to archive the trend data from the module to the Liebert SiteScan Web database. A trend graph can display data from both the control module and the database.

9.1 View an Existing Trend Graph

To view a trend graph:

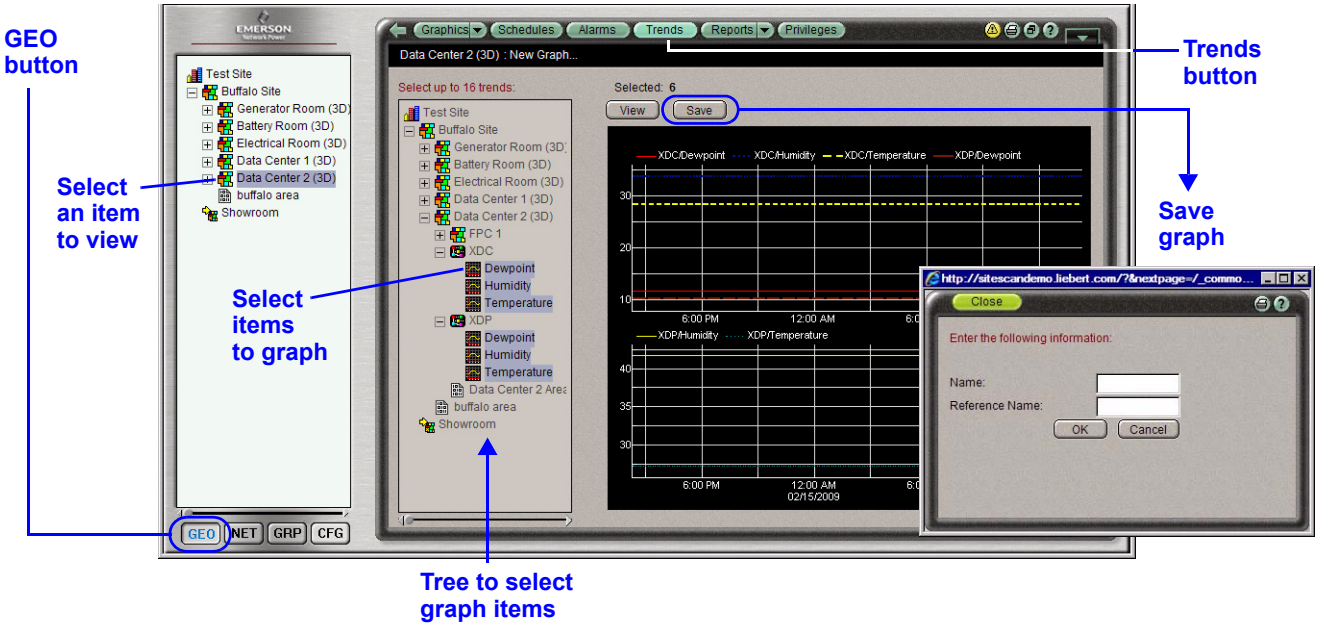
- Click the **GEO** button in the bottom left corner, then select an item in the tree at left.
- Click the **Trends** button at the top of the window. (If more than one graph has been saved, click the **Trends** button down arrow and choose a graph.) If no graph appears, proceed to **9.2 - Create a New Trend Graph**.
- Click **View** to display the graph. For tips on navigating the graph—zoom/pan, choose start dates, view point data—see **9.2.1 - Tools for Viewing Trends**.
- Click the **Print** icon in the top right corner of the Trends window to print the graph.



9.2 Create a New Trend Graph

To create a new graph:

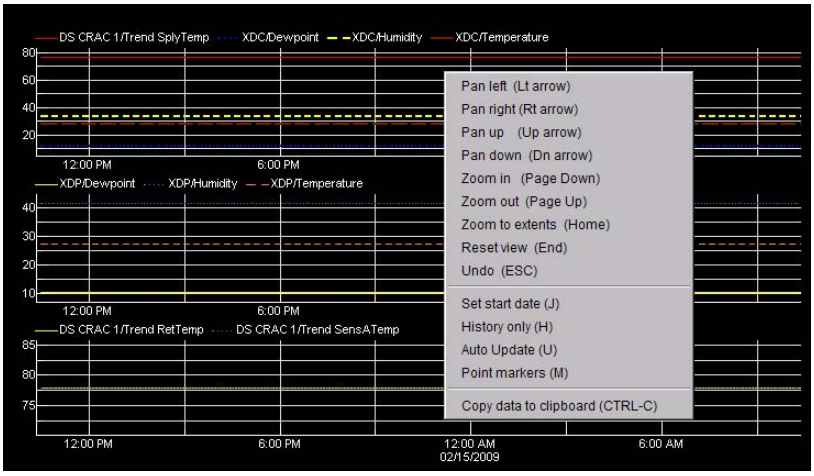
- Click the **GEO** button in the bottom left corner, then select an item in the tree at left.
- If any graph has been saved for this item, click the **Trends** button down arrow, then select **New Graph** from the drop-down menu. (This step is not needed if no graphs have been saved.)
- A new tree appears in the center, allowing you to select up to 16 items for the trend graph. Use standard shift-click and control-click methods to select multiple items.
- Click **View** to display the graph. For tips on navigating the graph—zoom/pan, choose start dates, view point data—see **9.2.1 - Tools for Viewing Trends**.
- Click **Save** to store the graph. In the popup window, enter a name as you want it to appear on the Trends drop-down menu. A reference name is created automatically. Click **OK** when finished.



9.2.1 Tools for Viewing Trends

Some tips for viewing trend graphs follow:

- A vertical dashed line indicates missing data.
- A large marker indicates a point that is in alarm, in fault, out of service or has been overridden. Control-click the marker to view details.
- Right-click anywhere on a trend graph to display a popup menu with tools described in **Table 6**. Click on an item in the menu—or use keyboard shortcuts shown in parentheses ( ) on the menu.



- **Table 6** shows commands available from the popup menu shown above and two other options.

Table 6 Tools for viewing trend graphs

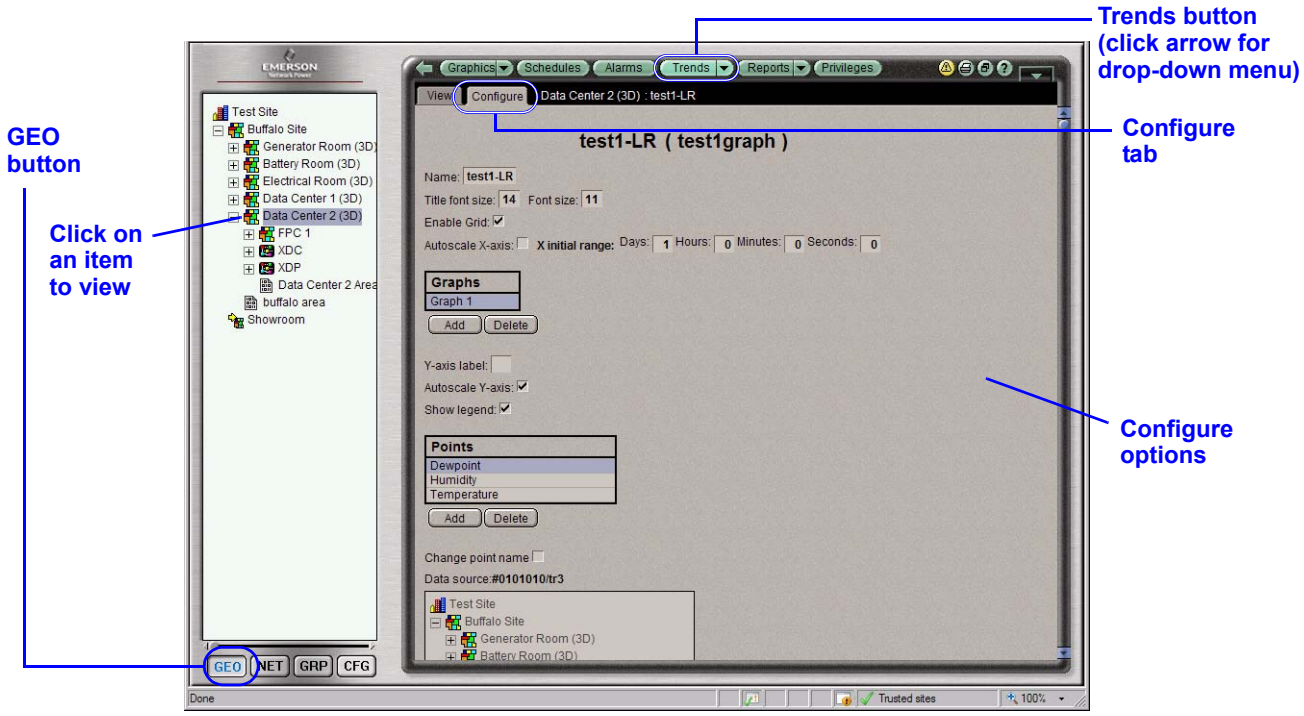
Tool	Keyboard Shortcut	Notes
Pan left/right/up/ down	Arrow keys	If you display more than one graph, panning up and down affects only one graph at a time. Panning left to right affects all graphs. You can also Alt+click and drag inside the graph.
Zoom in	Page Down	You can also use the plus (+) key on the numeric keypad, the **X** key, or drag a rectangle around area.
Zoom out	Page Up	You can also use the minus (-) key on the numeric keypad or the **Z** key.
Zoom to extents	Home	Shows all the data you have viewed in the current session of a particular trend graph.
Reset view	End	Resets the display to its default setting. You can also use the Enter or **R** key.
Undo	Esc	Undo up to 10 changes to your view.
Set start date	J	Enter the date you want the trend to jump to. The trend displays the same time range for the new date. Press the **J** key again to hide the date fields.
History Only	H	Displays only the historical data on the graph.
Auto Update	U	The trend graph polls for data every 10 seconds. Press **U** again to stop updating.
Point Markers	M	Shows a marker for each data point in the graph.
Copy	Ctrl+C	Copies only the data from the time range that is currently displayed.
Other Options ***(not available on the popup menu)***		
Refresh the display (gather trend data)	—	Click the **Trends** button.
Display data for a specific sample	—	Ctrl+click a sample to view the point name, time and date the sample was read, the exact point value, and if the point is in alarm, is in fault, out of service, or has been overridden. Click anywhere to clear the details.

9.3 Configure Trends

Once a trend graph has been saved, the **Configure** tab appears in the Trends window, allowing you to specify options for the graph, such as changing the name, changing the appearance, adding or deleting points or selecting a different data source.

To configure a trend graph:

- Click the **GEO** button in the bottom left corner, then click on an item in the tree at left.
- Click the **Trends** button down arrow, then select a graph from the drop-down menu.
- Click the **Configure** tab.



- Set up the desired options for the trend graph.
- When finished, click the **OK** button to save any changes (or **Cancel** to leave without saving).

10.0 VIEWING REPORTS

The **Reports** button offers a quick way to compile alarm and other information to help manage and troubleshoot your system. You may access existing reports (see **Sections 10.1** - **10.3**) or generate a custom report (see **10.4 - Set Up a New Report**).

10.1 Description of Liebert SiteScan Web Reports

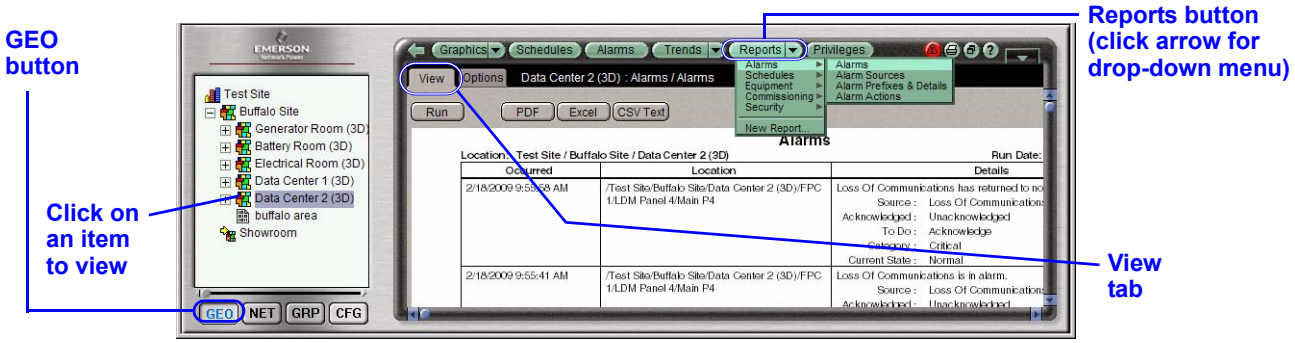
The reports available in Liebert SiteScan Web are described in **Table 7**.

Table 7 Description of available reports

Report	Description
Alarms	
Alarms	View, sort and filter the information displayed in the Alarms **View** tab.
Alarm Sources	Create a summary of potential alarm sources configured in the Alarms **Enable/Disable** tab.
Alarm Prefixes & Details	Create a summary of the information configured in the Alarms **Messages** tab.
Alarm Actions	Create a summary of the information configured in the Alarms **Actions** tab.
Schedules	
Schedule Instances	Find every schedule entered at and below a selected tree item. This report shows the location of each item and can help you find newly added and conflicting schedules.
Effective Schedules	View all equipment that may be scheduled and the net result of all schedules in effect for a selected date and time.
Equipment	
Point List	View the details of all points and verify that all points were checked out during commissioning. Create custom lists for other contractors, such as a list of BACnet IDs or Web services links.
Locked Values	Find all locked points and locked values.
Network IO	Verify the programming and status of all network points—especially useful for commissioning control modules used for third-party integration.
Trend Usage	Create a summary of the information configured in the Trends **Enable/Disable** tab.
Parameter Mismatch	Find out whether your system has any parameter mismatches that need to be resolved.
Network	
Equipment Status	Display the thermographic color, status and prime variable of each control program.
Module Status	Discover network communication problems (shown as purple squares on the report) that need troubleshooting.
Commissioning	
Test & Balance	View the results of VAV box commissioning.
Equipment Checkout	View the information on the **Equipment Checkout** tab of the Point Checkout tool during commissioning. Also, find equipment that has not been fully commissioned.
Security	
Audit Log	Create a chronological list of operators with property changes they have made and the reasons for those changes.
Security Assignments	View a list of locations showing which operators are assigned to each location and their privilege sets.

10.2 View Reports

- Click the **GEO** button in the bottom left corner.
- Click on an item in the tree at left—**Data Center 2** in the example below.
- Click the **Reports** button at the top, then click on the **View** tab.

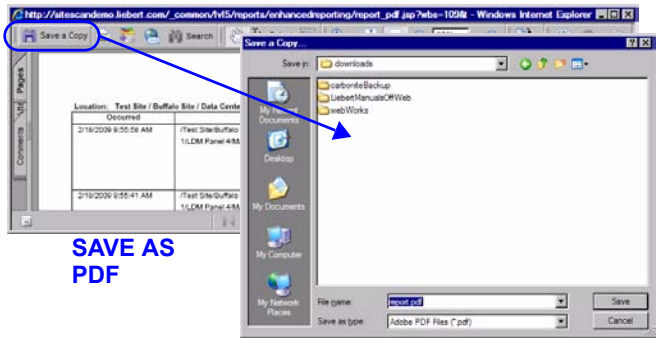


- To view an existing report, click on the **Reports** down arrow, then on a category. Choose a report from the submenu.
- Click the **Run** button below the **View** tab to generate a report.
- Once the report is displayed, you may copy the report contents to a file.

PDF

To create a PDF that may be opened with Adobe Reader or Acrobat:

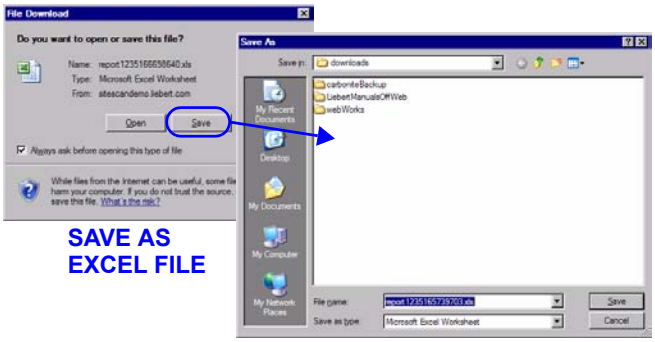
- Click the **PDF** button. A program window displays the PDF.
- Click the **Save a Copy** button to open the Save a Copy window, top right.
- Specify where to save the file and a file name. Click the **Save** button.



Excel

To create a spreadsheet that may be opened with Microsoft Excel:

- Click the **Excel** button. If prompted whether to save or open, click **Save** to create a file.
- In the Save As window, center right, choose where to save the file and specify a file name. Click the **Save** button to download the file.

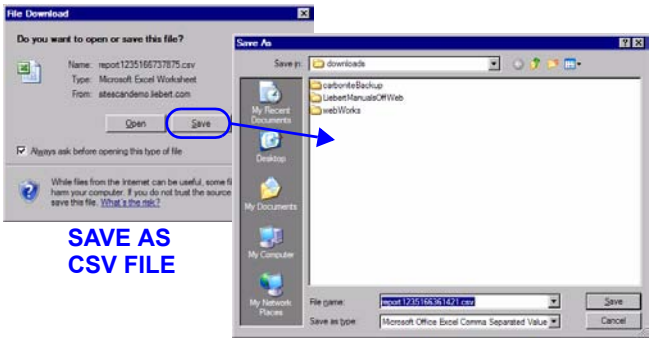


CSV

To create a CSV file that may be opened with a spreadsheet program or text editor:

Make sure the CSV feature is enabled (see **10.3 - Set Up Report Options**).

- Click the **CSV Text** button. If prompted whether to save or open, click **Save** to create a file.
- In the Save As window, bottom right, choose where to save the file and specify a file name. Click the **Save** button to download the file.

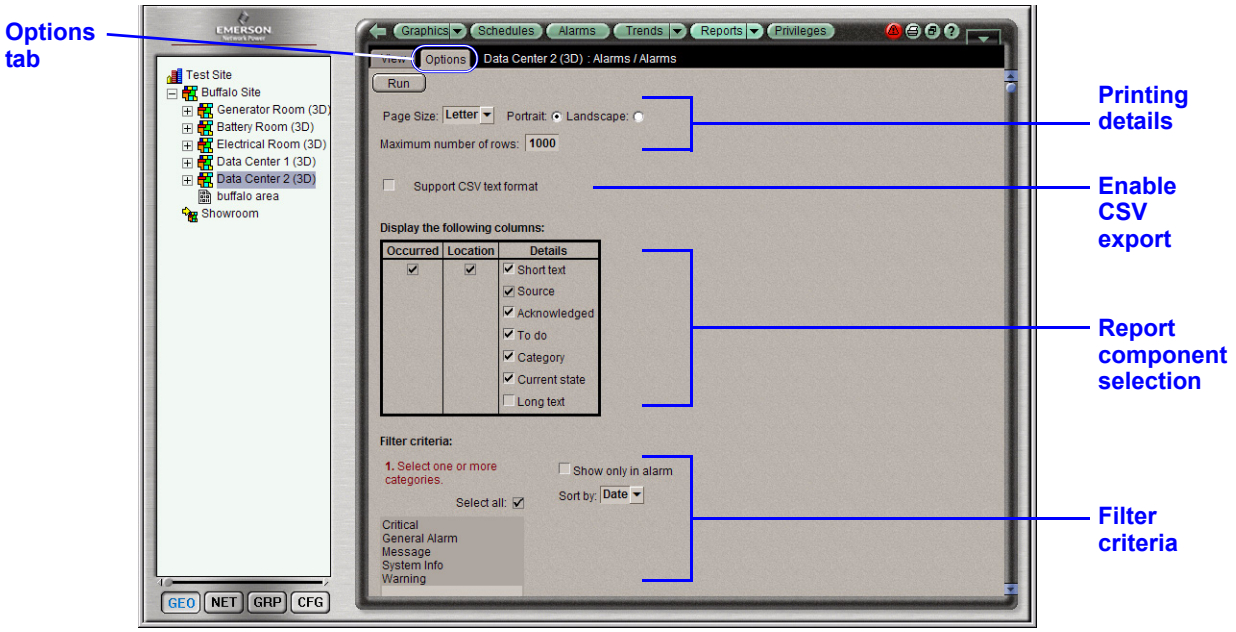


10.3 Set Up Report Options

The Reports **Options** tab allows you to customize reports. For all report types, you may specify page size, orientation and maximum length. Other options vary by type of report.

To access the report Options functions:

- Click the **GEO** button, then click on an item in the tree at left.
- Click the **Reports** button, then the **Report Options** tab.



- In the **Printing details** section:
  - Specify the size of the report page by clicking the Page Size down arrow and selecting an option from the drop-down list—for example, **Letter**, **Legal** or **A4**.
  - Choose the orientation by clicking on **Portrait** or **Landscape**.
  - Specify the maximum number of rows to appear in the report—in the example above, **1000**. This may be helpful to reduce the size of reports you expect to be excessively long.
- Place a check mark (✔) in the **Support CSV text format** box to enable saving a report as a CSV file. When this option is enabled, the **CSV Text** button is activated in the View tab (see **10.2 - View Reports**).
- In the **Report component selection** section (not available for all report types):
  - For some report types, you may choose which report components to show or hide in the **Display the following columns** table.
  - Click to place a check mark (✔) for items you want to include; click to remove the check mark for items you want to omit. Some check boxes may be grayed-out; these items may not be changed.
- In the **Filter criteria** section (choices vary by report type):
  - Many report types allow you to choose criteria to filter the report. In the example above, you may select the categories that contain the alarm sources you want to view. Control-click to select multiple items, or click to place a check mark (✔) in the Select All check box.
  - For alarm reports, you may choose to include only those items that are currently in alarm. To do this, click to place a check mark (✔) in the **Show only in alarm** check box. (Leave the check box blank to include all items.)
  - If there is an option to sort the report, click on the Sort By arrow and select an option from the drop-down menu—in the example above, **Date** or **To Do**.
- When finished, click **OK** (or **Cancel** to close the window without saving your changes).
- At any time, click on the **Run** button to view the report.

10.4 Set Up a New Report

In addition to the standard reports available from the **Reports** button drop-down menu, Liebert SiteScan Web provides three basic templates for you to design a new report:

- Equipment Summary
- Equipment Values*
- Trend Samples*

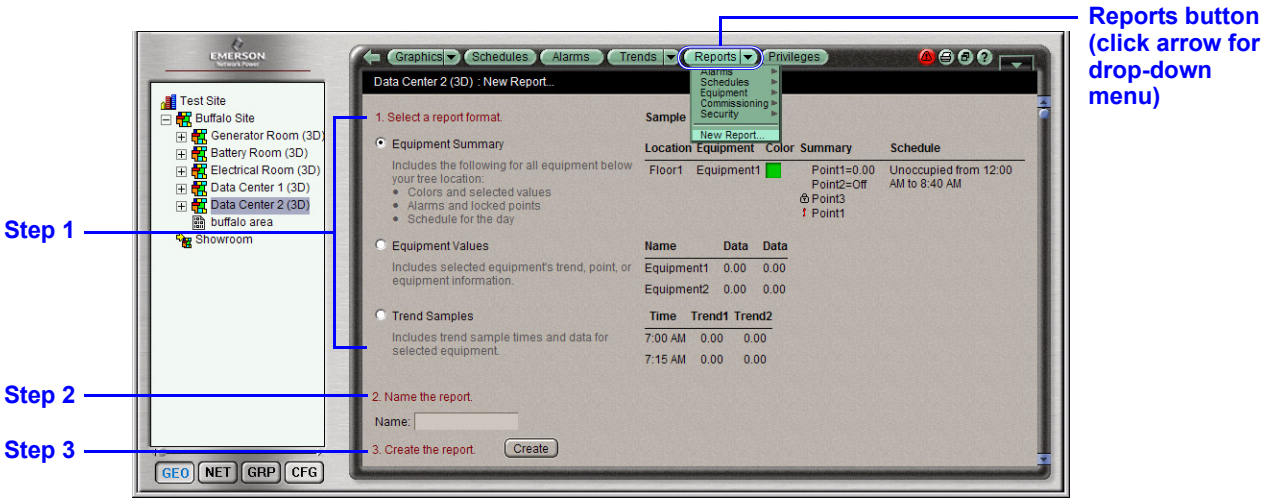
* *Available with the optional Advanced Reporting package*

Once a new report is set up, it appears on the **Reports** drop-down menu. See **10.2 - View Reports** for details on all the functions available after the new report appears on the menu.

After creating a new report, the **Options** tab changes to the **Design** tab. At any time, you may select the report and click on the **Design** tab to make additional changes.

To set up a new report:

- Click the **GEO** button, then click on an item in the tree at left.
- Click the **Reports** button arrow, then click on **New Report** in the drop-down menu. Steps are listed in red, as shown below.



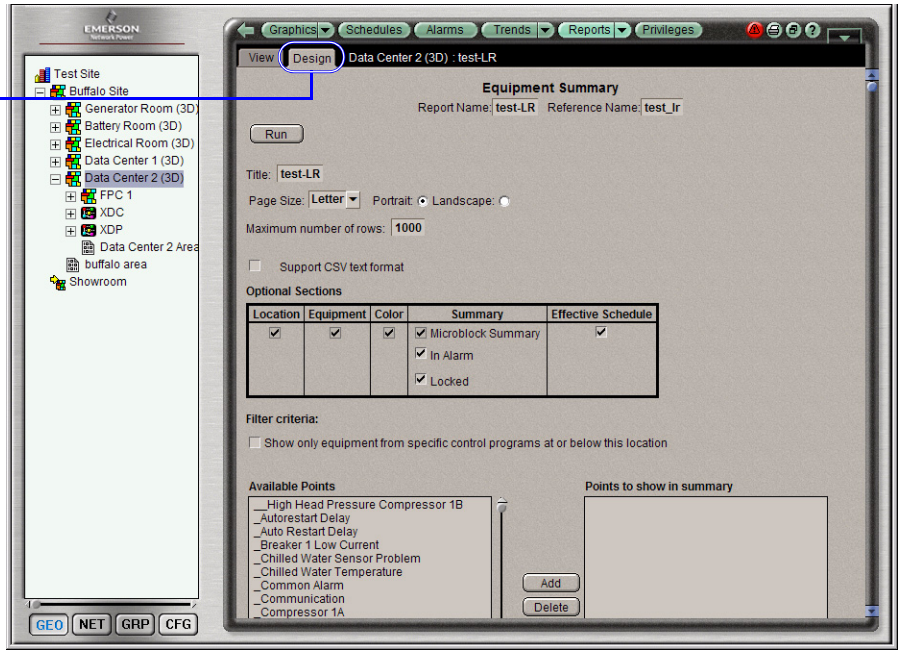
10.4.1 Create a New Report

1. Choose one of the report formats: **Equipment Summary**, **Equipment Values** or **Trend Samples**. Each format has a description and an example of the layout.
2. In the Name box, enter a report name as you want it to appear on the **Reports** drop-down menu.

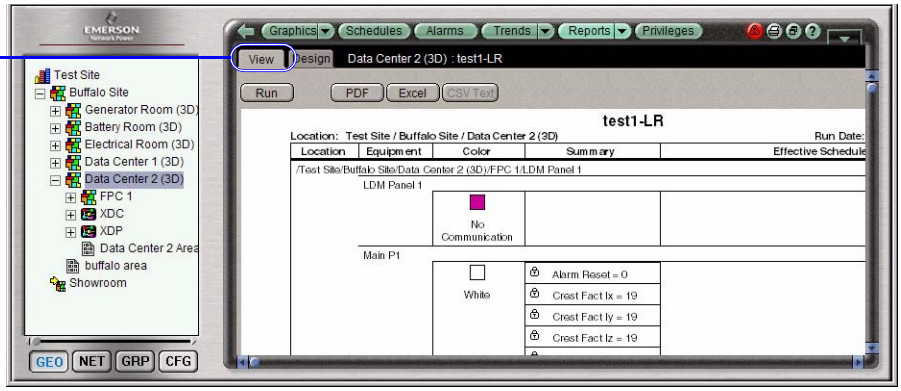
   Note: If you have created report categories via the CFG Categories function, you may click on the **Category** arrow and select an option from the drop-down menu.
3. Click the **Create** button to create the new report. The **Options** tab label changes to **Design**. To design the new report, proceed to the next section, **10.4.2 - Design the New Report**

10.4.2 Design the New Report

After you create a new report, click the **Design** tab to make changes to the format, as shown below.



- The top center portion of the window displays the report type and name. You may change the report name in the Title box below the Run button.
- The Design tab displays the same choices as the Options tab (see **10.3 - Set Up Report Options**) for page size, orientation, maximum number of rows and enabling support for CSV.
- Each custom template provides additional options that vary by report type. The example above shows the design options for the Equipment Summary report.
- When finished, click **OK** to save your changes (or **Cancel** to close the window without saving).
- At any time, click on the **Run** button to display the report in the View tab. The example below shows the Equipment Summary report.



11.0 CONFIGURING LIEBERT SITESCAN WEB

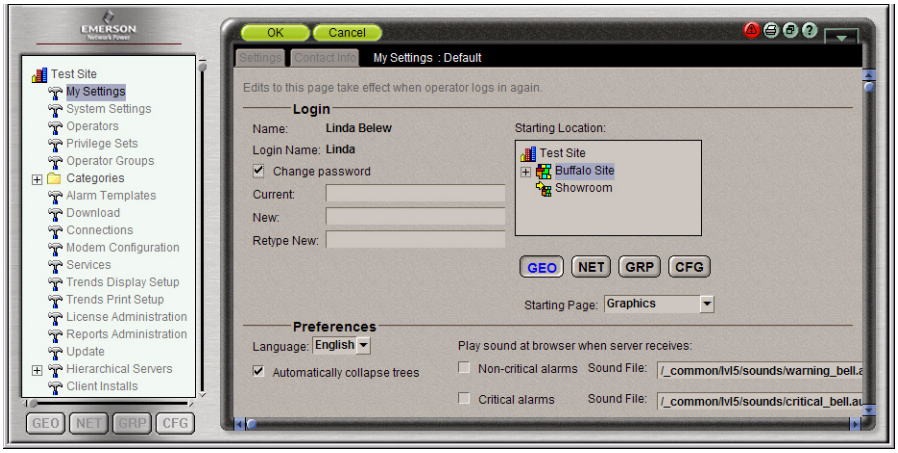
Most of the configuration for Liebert SiteScan Web is performed by Liebert Services. This section provides instructions on how to change the most commonly used configuration settings.

11.1 My Settings

My Settings has two tabs—**Settings** and **Contact Info**—that apply to the user currently logged in.

11.1.1 Settings

- Click on the **CFG** button, then click on **My Settings** in the tree at left.
- Click on the **Settings** tab to display the following window.



Change Password

To change the login password:

- In the Login section, click to place a check mark (✔) in the Change Password box.
- Enter the existing password in the Current Password box.
- Enter the new password in the New Password box. The password is case-sensitive.
- Confirm the new password by re-entering it in the Retype New Password box.

Change Starting Location

To specify the opening view for Liebert SiteScan Web after you log in:

- Click on an item in the tree below Starting Location. Click the plus (+) sign to expand an item.
- Click on the view button—e.g., **GEO** or **CFG**—to be active when Liebert SiteScan Web starts.
- Click on the Starting Page arrow and select an option from the drop-down menu to determine the menu action button—e.g., **Graphics** or **Alarms**—to be active when Liebert SiteScan Web starts.

Change Preferences

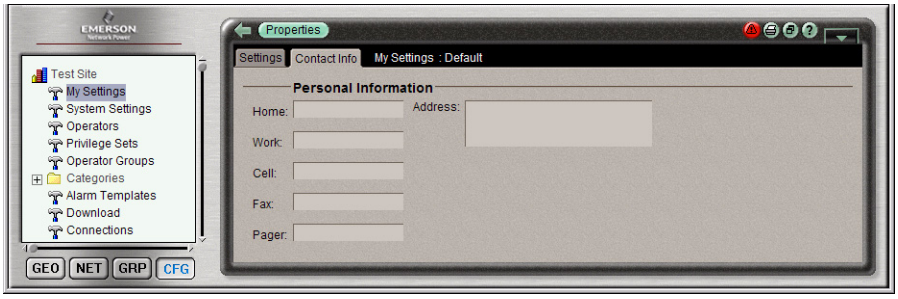
- The Language box has a drop-down menu of available languages. To set up your system for a language other than English, see the Help file for detailed procedures.
- Click to place a check mark (✔) in the **Automatically collapse trees** box to expand only one tree branch at a time.
- You may specify a custom sound file (with the extension **.au** or **.wav**) for each alarm type. Click to place a check mark (✔) in the alarm type box—**Non-critical alarms** or **Critical alarms**—and enter the file name with its path in the corresponding Sound File text box.

Save Changes

- When finished, click **OK** (or **Cancel** to close the window without saving your changes).

11.1.2 Contact Info

- Click on the **CFG** button, then click on **My Settings** in the tree at left.
- Click on the **Contact Info** tab to display the following window.



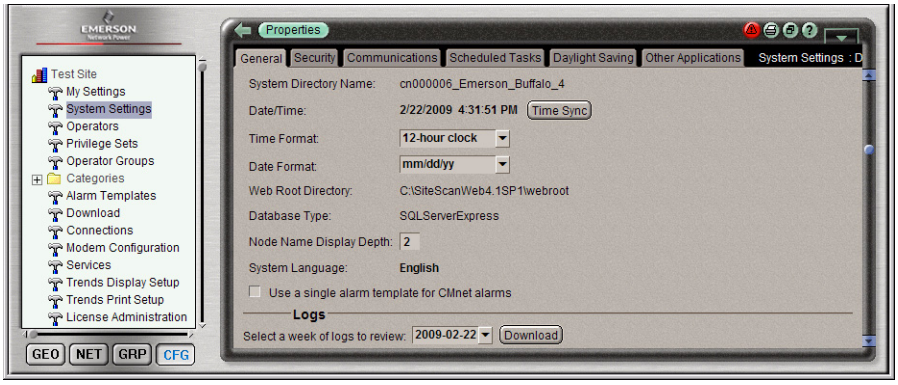
- Enter your contact information in the text boxes:
  - Enter telephone numbers for **Home**, **Work**, **Cell**, **Fax** and **Pager**.
  - Enter your work location in the **Address** box.
- When finished, click **OK** (or **Cancel** to close the window without saving your changes).

11.2 System Settings

This section describes two tabs in System Settings: **General** and **Daylight Saving**.

11.2.1 General

- Click on the **CFG** button, then click on **System Settings** in the tree at left.
- Click on the **General** tab to display the following window.

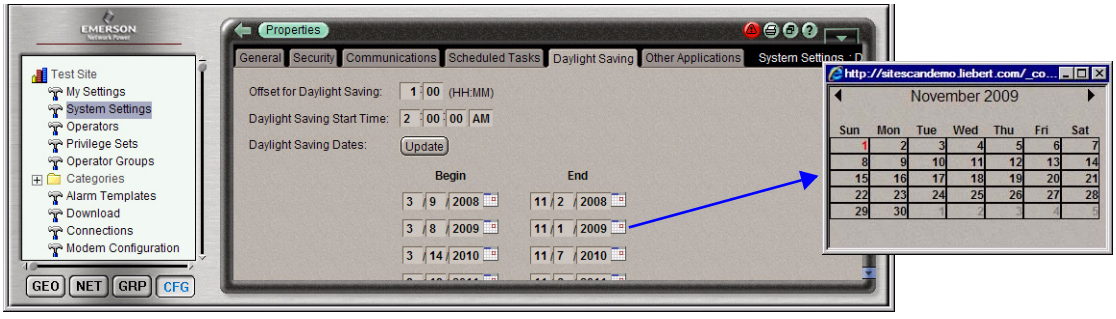


- The **General** tab displays several items that are not editable: System Directory Name, Current System Time, Path to the Web Root Directory, Database Type, System Language
- Choose the Time Format: **12-hour clock** (4:34 pm) or **24-hour clock** (16:34).
- Choose the Date Format—for example, **mm/dd/yy**.
- The Node Name Display Depth box shows the number of levels displayed in paths in Liebert SiteScan Web. For example, if this value is set at:
  - **2**, a typical path might be ..\First Floor\AHU
  - **3**, a typical path might be ..\Atlanta R&D\First Floor\AHU

  Changing this field does not take effect until you restart the Liebert SiteScan Web server.
- **Use a single alarm template for CMnet alarms** applies to upgraded legacy systems:
  - Check the box to use the **alert_auto alarm** template only CMnet equipment alarms.
  - Leave the box unchecked to allow multiple alarm templates.
- In the **Logs** section, you may download a zip file with logs of system activity for a specified week. Choose a beginning date in the **Select a week of logs to review** drop-down list, then click the **Download** button.

11.2.2 Daylight Saving

- Click on the **CFG** button, then click on **System Settings** in the tree at left.
- Click on the **Daylight Saving** tab to display the following window.



- The Offset for Daylight Saving time should be **1 hour**, using the format HH:MM (01:00).
- Daylight Saving Start Time is typically 2:00 a.m. Enter in the format HH:MM:SS (02:00:00), then click on the AM/PM box to toggle between **AM** and **PM**.
- Daylight Saving Dates should have Begin and End dates for each year. Click on a calendar icon, then click on a date in the calendar, shown above right, or enter the date in mm/dd/yyyy format.

11.3 Set Up Users

The Administrator may set up users, defined as Operators in Liebert SiteScan Web, with customized access privileges. These operators may also be designated as recipients of alarm messages, as described in **8.4 - Actions**.

NOTES

Liebert SiteScan Web has a default ***Administrator*** *operator. For security, either assign a password to this operator or delete it after assigning Admin privileges to another operator. With hierarchical servers, you must create identical operators on each server.*

Users may be assigned to Operator Groups to simplify the process of assigning access privileges and setting up recipients for alarm messages, as described in **11.3.2 - Create Operator Groups**.

11.3.1 Set Up Operators

The Operators window allows you to add, edit or delete users and assign access privileges.

- Click on the **CFG** button, then click on **Operators** in the tree at left.
- Click the **Add** button to create a new user or click on an existing user in the **Operators** list. The operator's data appears to the right.

- To remove an existing user, click the **Delete** button.
- In the **Login** section:
  - In the Name box, enter a name that will appear in lists in Liebert SiteScan Web.
  - In the Login Name box, enter a name for the operator to enter when logging in. This name must be unique within the system.
  - To assign a new password, check (✔) **Change password**, then refer to **11.1 - My Settings**.
  - To prompt a user to create a password, check **Force user to change password at login** box. Be sure to assign a temporary password.
  - Specify whether to use automatic logoff for this user: after 15 minutes of inactivity, a different time (up to 500 hours maximum) or not at all.
- Complete the Personal Information for this user (see **11.1.2 - Contact Info** for details).
- Specify the Starting Location when this user logs in (see **11.1.1 - Settings** for details).
- In the **Privilege** section:
  - To assign access privileges to the user, check (✔) appropriate boxes under **System-Wide Privilege Sets** (see **11.4.1 - Add a Privilege Set**).
  - To assign the user to any groups, check (✔) appropriate boxes under **Groups** (see **11.3.2 - Create Operator Groups**). The user will have the same privileges as the group.

  Note: To hide items not assigned to this user, check (✔) **Show current privileges only**. A grayed-out privilege set indicates it was assigned to the operator through a group listed next to the privilege—for example, *Admin From Reps*.
- When finished, click **OK** (or **Cancel** to close the window without saving your changes).

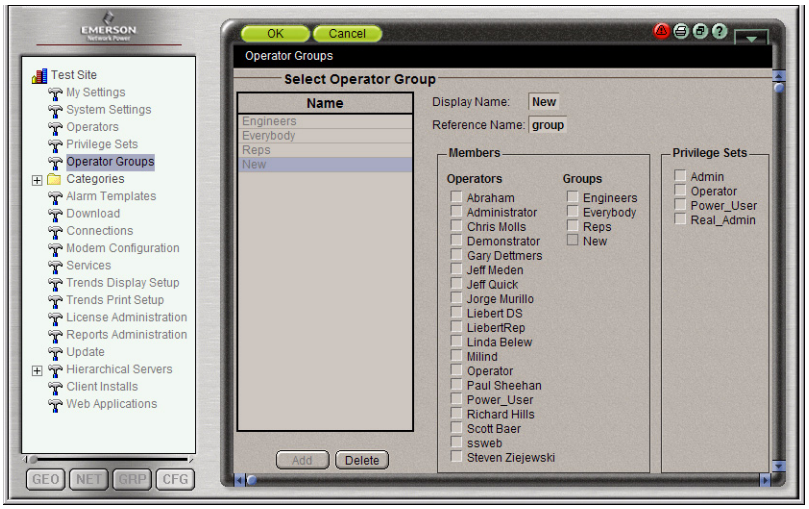
11.3.2 Create Operator Groups

Users may be assigned to Operator Groups to simplify the process of assigning access privileges and setting up recipients for alarm messages. This step requires that individual operators have been created, as described in **11.3.1 - Set Up Operators**.

NOTE

*Liebert SiteScan Web has a permanent default group called **Everybody** that automatically includes all operators as members. You may assign privilege sets to this default group.*

- Click on the **CFG** button, then click on **Operator Groups** in the tree at left.
- Click the **Add** button to create a new group or click on an existing group in the **Name** list. The group's data appears to the right.



- To remove an existing group, click the **Delete** button.
- In the Display Name box, enter a name that will appear in lists in Liebert SiteScan Web.
- Enter a system name in the Reference Name box. The reference name must consist of alphanumeric and underscore characters only and may not begin with a numeral.
- In the **Members** section, check (✔) each existing individual operator under **Operators** you wish to add to the group. You may also add another group by checking boxes under **Groups**.
- To assign access privileges to the group, check (✔) appropriate boxes under **Privilege Sets** (see **11.4.1 - Add a Privilege Set**).
- When finished, click **OK** (or **Cancel** to close the window without saving your changes).

11.4 Assign Privileges to Users

You may create Privilege Sets—permission to use selected features in Liebert SiteScan Web—and assign them to individual operators and operator groups.

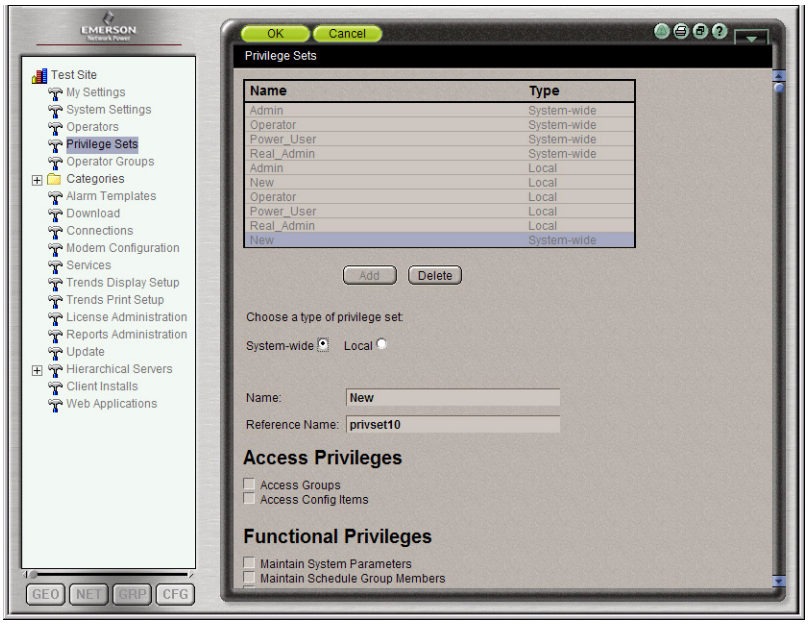
NOTE

*Liebert SiteScan Web comes with a default privilege set called **Admin** that includes most privileges. Only an operator with the Admin privilege set can perform the following functions that are not controlled by privileges:*

- *Add, edit and delete operators, operator groups and privilege sets.*
- *Update Liebert SiteScan Web Server.*
- *Register the Liebert SiteScan Web license.*
- *Enable and set up advanced security features such as location-dependent operator access and a configurable password policy (if included in your system).*

11.4.1 Add a Privilege Set

- Click on the **CFG** button, then click on **Privilege Sets** in the tree at left.
- Click the **Add** button to create a new set of privileges or click on an existing set. The set's data appears below the button.



- To remove an existing privilege set, click the **Delete** button.
- Choose the type of privilege set: **System-wide** (available to assign to other users) or **Local**. Each option brings up a corresponding list of privileges from which to choose.
  - **System-wide** privileges include access and functional privileges.

    These privilege sets may be assigned to other users in the Operators window (see **11.3.1 - Set Up Operators**) and Operator Groups window (see **11.3.2 - Create Operator Groups**).
  - **Local** include access, parameter and functional privileges.

  Note: Once a privilege set is created, the only way to change the type is to delete the set and create a new one.
- In the Name box, enter a name that will appear in lists in Liebert SiteScan Web.
- Enter a system name in the Reference Name box. The reference name must consist of alphanumeric and underscore characters only and may not begin with a numeral.
- Click to place a check mark (✔) for each privilege you want to include in this privilege set. Refer to **Table 8** for a complete list of privileges with descriptions.
- When finished, click **OK** (or **Cancel** to close the window without saving your changes).

Table 8 provides descriptions for all privileges available in the **Privilege Sets** window.

Table 8 Privilege descriptions

Access Privileges	**Operators may access (but not edit):**
Access Geographic Locations	Pages from the GEO tree.
Access Network Items	Pages from the NET tree.
Access Groups	Pages from the GRP tree.
Access Config Items	Pages from the CFG tree.
Access Alarms	Alarms.
Access Logic Pages	Logic pages.
Access User Category (1-5)	Anything in a category that has the same privilege assigned to it. **Note:** These categories may be used to create a custom privilege: • You can assign a privilege to a Graphic, Property, Trend, or Report category so that only operators with that privilege can access the category. You assign a category privilege on the page where you create or edit categories. • If all the other privileges are too widely used to accomplish the results you want, you can assign one of the five Access User Category privileges to the operators and category.
Parameter Privileges	**Operators may edit properties such as:**
Edit Setpoint Parameters	Occupied and unoccupied heating and cooling setpoints.
Edit Tuning and Logic Parameters	Gains, limits, trip points, hysteresis, color bandwidths, design temperatures and optimal start/stop.
Edit Manual Override Parameters	Locks on input, output and network points.
Edit Point Setup Parameters	Point number, type, range and network source and destination.
Edit Restricted Parameters	Properties the installer restricted with this privilege.
Edit Category Assignments	Alarm, Graphic, Trend and Report category assignments.
Edit History Value Reset	Elapsed active time and history resets and runtime hours.
Edit Trend Parameters	Enable trend logging, log intervals and log start/stop times.
Edit Calibration Parameters	Point calibration offsets.
Edit Hardware Device Parameters	Module driver properties.
Edit Critical Configuration	Critical properties the installer protected with this privilege.
Edit Area Name	Area display names.
Edit Equipment Name	Equipment display names.
Edit Alarm Configuration	Enabling/disabling alarms and editing alarm messages, actions, categories and templates.
InterOp Privilege 1 - 10	Those protected by password levels 1-10 in SiteScan 2000.
Functional Privileges	**Operators may:**
Manage Alarm Messages and Actions	Add, edit and delete alarm messages and actions.
Maintain System Parameters	Edit all properties on the System Settings page.
Maintain Schedules	Add, edit, delete and download schedules.
Maintain Schedule Group Members	Add, edit and delete schedule groups.
Maintain Categories	Add, edit and delete categories.
Maintain Trends Display and Print Setup	Edit Trends Display Setup and Trends Print Setup on the CFG tree.
Maintain Alarm Templates	Edit Alarm Template and Reporting Action Templates.
Acknowledge Non-Critical Alarms	Acknowledge all non-critical alarms.
Acknowledge Critical Alarms	Acknowledge all critical alarms.

Table 8 Privilege descriptions *(continued)*

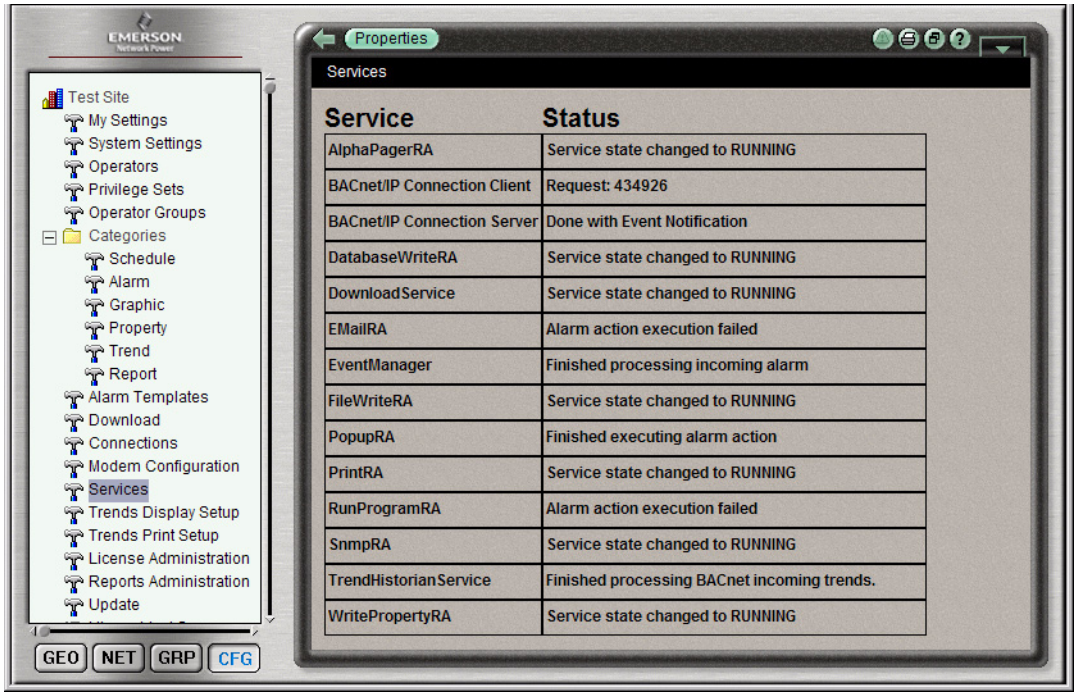
Functional Privileges *(continued)*	**Operators may:**
Force Normal Non-Critical Alarms	Force non-critical alarms to return to normal.
Force Normal Critical Alarms	Force critical alarms to return to normal.
Delete Non-Critical Alarms	Delete non-critical alarms.
Delete Critical Alarms	Delete critical alarms.
Execute Audit Log Report	Run the Audit Log Report.
Download Devices	Mark equipment for download and initiate a download.
System Shutdown	Issue the Shutdown manual command that shuts down Liebert SiteScan Web Server.
Engineer System	• Log in and make database changes in SiteBuilder. • Use the copy, notify, reload and revert manual commands. • Access the Configure and Set up Tree right-click menus in Liebert SiteScan Web. • Add text in the Notes field on an equipment's Properties page.
Access Commissioning Tools	Access: • Equipment Checkout • Airflow Configuration • Trend, Report and Graphic categories that require this privilege • Discovery tool
Maintain Graphs and Reports	Add, edit and delete trend graphs and reports.
Maintain Connections	Edit Connections page properties.
Remote File Management	Access files using a WebDAV utility.
Remote Data Access-SOAP	Retrieve data through an Enterprise Data Exchange (SOAP) application.
Do not audit changes made using SOAP (Web services)	Not have SOAP (Web services) changes recorded in the Audit Log.
Manual Commands/Console Operations	Access the manual command dialog box and issue basic manual commands.
Manual Commands/File IO	Execute manual commands that access the server's file system.
Manual Commands/Adv Network	Execute manual commands that directly access network communications.
Manual Commands/Unrestricted	Execute manual commands that bypass all safeguards and may cause unpredictable results if used incorrectly.

11.5 Services

The Services window displays all current services for Liebert SiteScan Web and the status of each.

To access the Services window:

- Click on the **CFG** button, then click on **Services** in the tree at left.

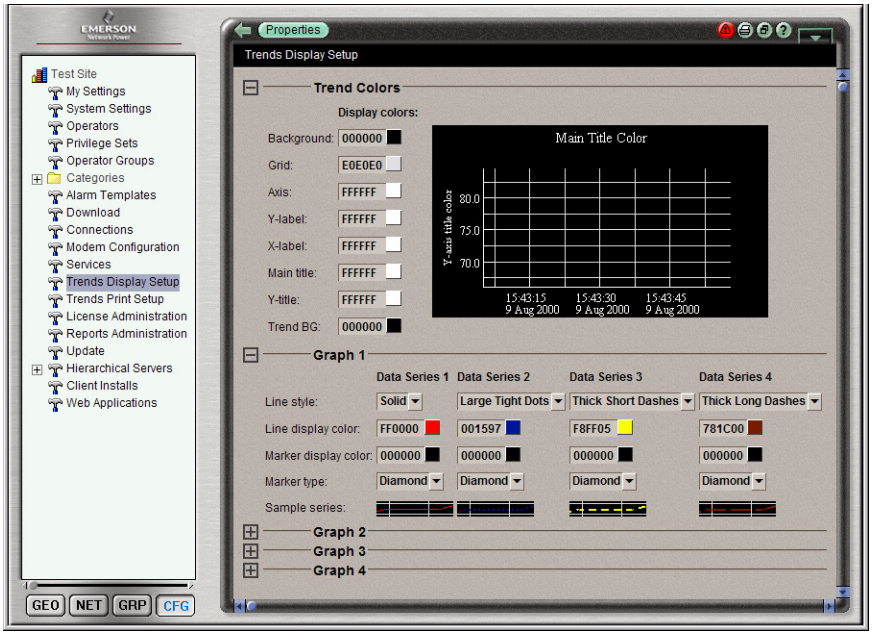


11.6 Trends Setup

11.6.1 Trends Display Setup

The Trends Display Setup options allow you to specify the appearance of graphs on the screen.

- Click on the **CFG** button, then click on **Trend Display Setup** in the tree at left.

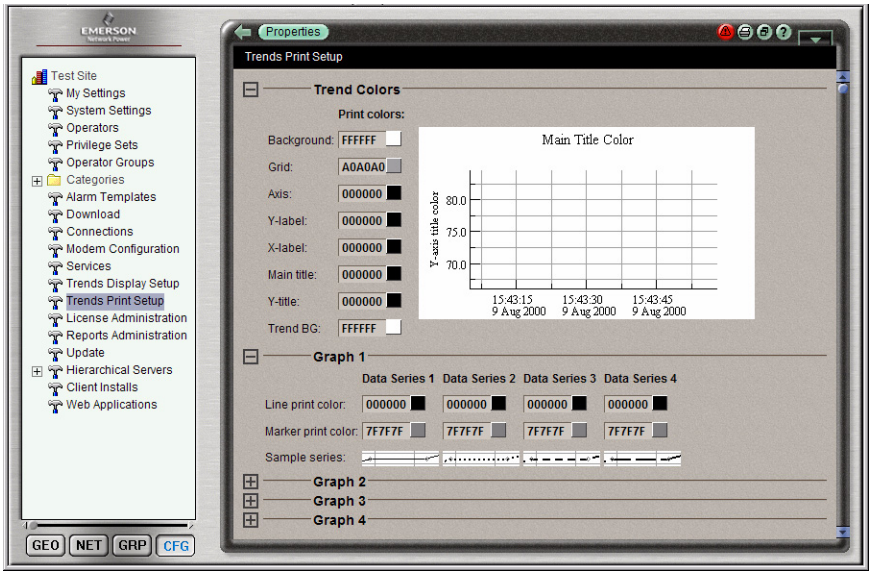


- In the Trend Colors section, choose options to specify colors for all graphs for the background, grid and axis, as well as text portions: labels for x-axis and y-axis labels, the main title and the y-axis title.
- You may set up display options for up to four types of graphs, including line style and color and marker color and type.

11.6.2 Trends Print Setup

The Trends Print Setup options allow you to specify the appearance of graphs on the printer.

- Click on the **CFG** button, then click on **Trends Print Setup** in the tree at left.



- In the Trend Colors section, choose options to specify colors for all graphs for the background, grid and axis, as well as text portions: labels for x-axis and y-axis labels, the main title and the y-axis title.
- You may set up display options for up to four types of graphs, including line style and color and marker color and type.

11.7 Client Installs

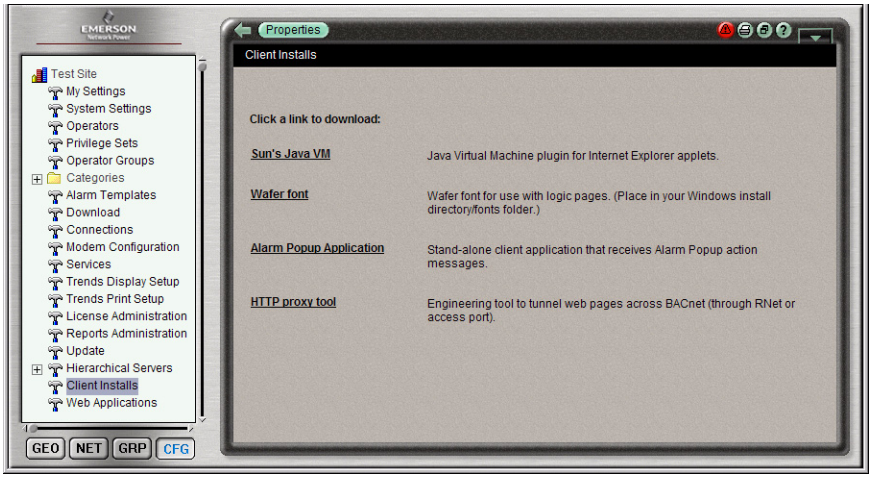
Client Install is used to install the Java Virtual Machine on the current connected workstation. Install only if required.

Wafer Font is used by Liebert SiteScan Web to display specific text in the Liebert SiteScan Web session. Install only if required.

Alarm Pop Application is a thin application that can be used by a client to receive alarm notifications to a workstation outside of the Liebert SiteScan Web browser.

To access these downloads:

- Click on the **CFG** button, then click on **Client Installs** in the tree at left.



Click a link to download:

- **Sun's Java VM**: Java Virtual Machine plug-in for Internet Explorer applets.
- **Wafer font**: Wafer font for use with logic pages. (Place in your Windows install directory/fonts folder.)
- **Alarm Popup Application**: Stand-alone client application that receives Alarm Popup action messages.
- **HTTP proxy tool**: Engineering tool to tunnel web pages across BACnet (through RNet or access port).

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