EcoStruxure Building Operation

WorkStation

Operating Guide

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Life Is On | Schneider Electric

Legal Information

Purpose of This Guide

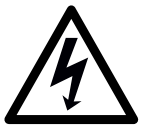
This guide provides information about WorkStation, such as logging on, monitoring alarms, and editing schedules. This information is intended to help you understand WorkStation so you can perform common tasks.

The procedures described in this guide are intended to reflect best cybersecurity practices. In the event that you suspect the information is not correct, please contact your Schneider Electric representative and report your finding.

Safety Information

Important Information

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service or maintain it. The following special messages may appear throughout this bulletin or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.



The addition of this symbol to a “Danger” or “Warning” safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER
DANGER indicates a hazardous situation which, if not avoided, **will result in** death or serious injury.

⚠ WARNING
WARNING indicates a hazardous situation which, if not avoided, **could result in** death or serious injury.

⚠ CAUTION
CAUTION indicates a hazardous situation which, if not avoided, **could result in** minor or moderate injury.

NOTICE
NOTICE is used to address practices not related to physical injury.

Please Note

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.

Cybersecurity Safety Notice

NOTICE

POTENTIAL COMPROMISE OF SYSTEM AVAILABILITY, INTEGRITY, AND CONFIDENTIALITY

- Change default passwords at first use to help prevent unauthorized access to device settings, controls, and information.
- Change passwords regularly to help prevent unauthorized access to device settings, controls, and information.
- Do not share accounts. Each user must have their own account.
- When creating user and display names, it is important to avoid using personal information, and to consider regional privacy policies. Display names will appear in event logs to identify who performed operations on the device.
- It is recommended that log files be encrypted before transmission to help with security and privacy.
- Disable unused ports, services, and default accounts to help minimize pathways for malicious attackers.
- Place networked devices behind multiple layers of cyber defenses (such as firewalls, network segmentation, and network intrusion detection and protection).
- Use the recommended cybersecurity safety measures (for example, least privilege, separation of duties) to help prevent unauthorized exposure, loss, modification of data and logs, or interruption of services.

Failure to follow these instructions can result in loss of data, unauthorized system access, or equipment damage.

How to Report a Cybersecurity Vulnerability

In the event that a security vulnerability is discovered or suspected, the portal found at www.se.com/ww/en/work/support/cybersecurity/report-a-vulnerability.jsp is to be used for reporting and to establish communication around suspected issues.

Where to Find Additional Information

All the technical EcoStruxure BMS information is available online, on WebHelp.

WebHelp is a web-based help system for the EcoStruxure Building Operation software and SpaceLogic devices, the software and hardware that powers the EcoStruxure BMS.

By pressing F1 or clicking a Help button in the EcoStruxure Building Operation software your web browser opens WebHelp with the latest, up-to-date, technical documentation.

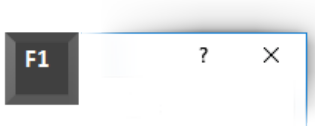


Figure – Help in EcoStruxure Building Operation software

Some EcoStruxure Building Operation software products give you context-sensitive help by opening a WebHelp page that explains the view or dialog box you have in focus. Some programs open up an overview page. From these pages, you can follow the links to get more detailed information.

WebHelp contains all the technical information that is in the guides, specification sheets, and installation sheets.

The WebHelp site

One of the advantages with WebHelp is that you can reach Help without having the EcoStruxure Building Operation software installed on your computer. By entering the URL address https://ecostruxure-building-help.se.com/bms you can access WebHelp from any computer, smartphone, or tablet connected to the internet.

Finding information

The easiest way to find information on WebHelp is to search for it.

Figure – Home page search

All technical information is gathered in one place, so you do not need to know which guide, specification sheet, or installation sheet the information is in.

Filtering the information

To narrow down the search results, you can use these filters:

- Product
- Functionality
- Information type

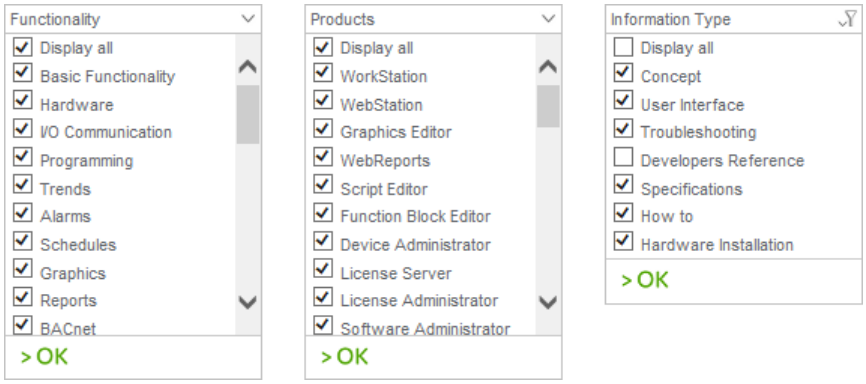


Figure – Search filters

Table of Contents

1 Start, Enter, and Exit WorkStation

What's in This Chapter?

1.1 WorkStation Overview

WorkStation is your main interface to your EcoStruxure BMS. You use WorkStation to perform all work on a daily basis in the EcoStruxure BMS.

1.1.1 Log on to WorkStation

You log on to WorkStation to securely access the functions in WorkStation. You log on to WorkStation as a Windows user or an EcoStruxure Building Operation user. Your system administrator decides which type of user you log on as.

For more information, see section 1.3 “Log on to WorkStation or WebStation” on page 17.

1.1.2 System Registration

As the owner, you register your EcoStruxure BMS to ensure that you are informed of the latest product news, relevant offers, and system updates. This information enables you to optimize maintenance and functionality of your system, protect asset value, and produce a healthier building for optimal comfort conditions.

For more information, see section 2.1 “System Registration” on page 25.

1.1.3 User Experience

The Work area in the EcoStruxure Building Operation user interfaces may vary depending on how it is set up. A typical EcoStruxure Building Operation workspace contains panes and views.

For more information, see section 3.1 “User Experience” on page 30.

1.1.4 Customization

In WorkStation you can customize your workspace to some extent. You can, for example, decide where workspace components, such as, Alarms are displayed.

For more information, see section 4.1 “Customization” on page 37.

1.1.5 Basic Functions

To get a better view of the objects in views and lists, you can use a number of functions like filtering, grouping, and sorting.

For more information, see section 5.1 “Basic Functions” on page 42.

1.1.6 Handle Values

You can change and force values using a graphic or the Properties pane. Using the Watch pane in WorkStation, you can dynamically monitor a value.

For more information, see section 6.1 “Modify Values ” on page 52.

1.1.7 How Alarms Work

You are notified by alarms when some important event occurs. For example, if the temperature is too low or too high in a building, if a window is open, or if something is broken, such as a fan. The system administrator sets up the alarms and decides to whom the alarm is sent.

For more information, see section 8.1 “How Alarms Work” on page 60.

1.1.8 How Events Work

All system events, as well as information and circumstances, are recorded in the Event log. These event records can be viewed in the Events pane or in an Event View.

For more information, see section 12.1 “How Events Work ” on page 82.

1.1.9 How Schedules Work

Schedules are used to schedule the operation of part of the building management system, such as a fan, a door, or a setpoint. Using a schedule, a fan can be set to operate between 08:00 and 17:00 every workday.

For more information, see section 16.1 “How Schedules Work” on page 149.

1.1.10 How Trend Logs Work

You use trend logs to record values, such as a sensor. A trend log can also log consumptions, such as energy consumption or water consumption.

For more information, see section 15.1 “How Trend Logs Work” on page 127.

1.1.11 How Graphics Work

You use graphics to display building overviews, display values from sensors, or change setpoints. A graphic can also contain links to trend charts, trend log lists, Internet sites, or views in WorkStation and WebStation.

For more information, see section 19.1 “How Graphics Work” on page 185.

1.1.12 How Documents Work

You can open documents stored on an EcoStruxure BMS server using the default program associated with the file type. For example, a txt-file opens Notepad and a ppt-file opens PowerPoint.

For more information, see section 20.1 “How Documents Work ” on page 188.

1.1.13 WorkStation Help

WorkStation Help provides you with information on how to handle and understand the EcoStruxure BMS.

For more information, see section 7.1 “WorkStation Help” on page 58.

1.2 Starting WorkStation

You start WorkStation to be able to view the information in your EcoStruxure BMS.

To start WorkStation

1. Click **Start**, point to **All Programs**, and then click **Schneider Electric EcoStruxure**.
2. Click **Building Operation x.y**.
3. Click **WorkStation Building Operation x.y**.

1.3 Log on to WorkStation or WebStation

You log on to WorkStation or WebStation to securely access the EcoStruxure Building Operation functions.

1.3.1 Log on to WorkStation

You log on to WorkStation with your current Windows credentials, as another Windows user, or as an EcoStruxure Building Operation user. Your system administrator decides which type of user you log on as.

To log on to WorkStation using an EcoStruxure Building Operation account, you need to know the following account information:

- User name
- Password
- Domain
- EcoStruxure BMS server

To log on to WorkStation using a Windows account, you need to know the EcoStruxure BMS server.

The account information for both the EcoStruxure Building Operation account and the Windows account is provided by the system administrator.

> **IMPORTANT:** Ensure that you have a working and available WorkStation license. A working license is required to log on to WorkStation. For more information, see the *Licenses* topic on WebHelp.

Remember me on this computer

For a faster log on in Workstation, use the Remember me feature to automatically fill in your user name, password, domain and server. Both Building Operation users and Windows users can use the Remember me feature.

Add a display name of the server address

When you log on to a new server, its IP address is added to the server list. You can add a display name of the server address to make it easier to find your server in the list.

1.3.2 Log on to WebStation

To log on to WebStation, you need to know the following account information:

- User name
- Password
- Domain
- EcoStruxure BMS server

The account information for your account is provided by the system administrator.

1.4 Logging on to WorkStation using your Windows user account

You log on to WorkStation to securely access the functions in the EcoStruxure BMS.

> **IMPORTANT:** Ensure that you have a working and available WorkStation license. A working license is required to log on to WorkStation. For more information, see the *Licenses* topic on WebHelp.

For more information, see section 1.3 “Log on to WorkStation or WebStation” on page 17.

To log on to WorkStation using your Windows user account

1. Select a **Server** hypertext transfer protocol option for communciation with the EcoStruxure BMS server.
2. In the **Server** box, enter an EcoStruxure BMS server name or an IP address.

   NOTE: You can also, in the scroll down menu, choose a server host name from the list. When you start typing the host name or the IP number of the server, you will be offered suggestions from the saved list.

   NOTE: When you log on to a new server, its IP address is added to the server list. You can add a display name of the server address to make it easier to find your server in the list.
3. Select **Log on as** to log on under the Windows user account you used to log on to the computer.
4. Select **Remember me on this computer** to have WorkStation remember your settings.
5. Click **Log on**.
6. You can register the system now or later:
   - Click **Register now** to register your system. For more information, see section 2.1 “System Registration” on page 25.
   - Click **Register later** to skip registration and register at a later time.

1.5 Logging on to WorkStation as another Windows User

You log on to WorkStation as another user than the current Windows user logged on to the computer to securely access the functions in the EcoStruxure BMS.

IMPORTANT: Ensure that you have a working and available WorkStation license. A working license is required to log on to WorkStation. For more information, see the *Licenses* topic on WebHelp.

For more information, see section 1.3 “Log on to WorkStation or WebStation” on page 17.

To log on to WorkStation as another Windows user

1. In WorkStation, in the **User name** box, type the name of the Windows user account you want to use to log on.
2. In the **Password** box, type the Windows password for the user account.
3. In the **Domain** box, type a Windows domain name. If you do not enter a domain name, you are logged on to the local domain as an EcoStruxure Building Operation User.

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4. Select the **HTTPS** protocol option for communication with the EcoStruxure BMS server.
5. In the **Server** box, enter an EcoStruxure BMS server name or an IP address.

   NOTE: You can also, in the scroll down menu, choose a server host name from the list. When you start typing the host name or the IP number of the server, you will be offered suggestions from the saved list.

   NOTE: When you log on to a new server, its IP address is added to the server list. You can add a display name of the server address to make it easier to find your server in the list.
6. Select **Remember me on this computer** to have WorkStation remember your settings.
7. Click **Log on**.
8. In the **Registering Your System Online** dialog box, you can register the system now or later:
   - Click **Register now** to register your system. For more information, see section 2.1 “System Registration” on page 25.
   - Click **Register later** to skip registration and register at a later time.

1.6 Logging on to WorkStation as an EcoStruxure Building Operation User

You log on to WorkStation to securely access the functions in the EcoStruxure BMS.

IMPORTANT: Ensure that you have a working and available WorkStation license. A working license is required to log on to WorkStation. For more information, see the *Licenses* topic on WebHelp.

For more information, see section 1.3 “Log on to WorkStation or WebStation” on page 17.

To log on to WorkStation as an EcoStruxure Building Operation user

1. In the **User name** box, type the EcoStruxure Building Operation user name.
2. In the **Password** box, type the password.
3. In the **Domain** box, type a domain name. If you do not enter a domain name, you are logged on to the local domain.
4. Select the **Server** hypertext transfer protocol option for communication with the EcoStruxure BMS server.

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5. In the **Server** box, enter an EcoStruxure BMS server name or an IP address.

   NOTE: You can also, in the scroll down menu, choose a server host name from the list. When you start typing the host name or the IP number of the server, you will be offered suggestions from the saved list.

   NOTE: When you log on to a new server, its IP address is added to the server list. You can add a display name of the server address to make it easier to find your server in the list.

6. Select **Remember me** to have WorkStation remember your settings.
7. Click **Log on**.
8. You can register the system now or later:
   - Click **Register now** to register your system. For more information, see section 2.1 “System Registration” on page 25.
   - Click **Register later** to skip registration and register at a later time.
9. If the **Select Default Workspace** window is displayed, click the workspace you want to have as the default.

1.7 Saving Log On Details

For a faster logon, use the Remember me feature to automatically fill in your logon information.

NOTE:
- For security reasons, your password is not automatically filled in.

For more information, see section 1.3 “Log on to WorkStation or WebStation” on page 17.

To save your log on details

1. In the Welcome window, select **Remember me on this computer**.
2. Click **Log on**.

1.8 Adding a Display Name of the Server Address

You add a display name of the server address to easier find your server in the list.

For more information, see section 1.3 “Log on to WorkStation or WebStation” on page 17.

To add a display name of the server address

1. **In the WorkStation window**, on the server addresses drop-down list box, highlight the IP address of the server you want to add the display name to.
2. Click the **Edit** button .

Continued on next page

3. In the **Edit Server** dialog box, in the **Name** box, type the display name of your server.
4. Click **OK**.

1.9 Editing the Display Name of the Server Address

You edit the display name of the server address when you need to change it.

For more information, see section 1.3 “Log on to WorkStation or WebStation” on page 17.

To edit the display name of the server address

1. **In the WorkStation window**, on the server addresses drop-down list box, highlight the IP address of the server you want to edit the display name of.
2. Click the **Edit** button  .
3. In the **Edit Server** dialog box, in the **Name** box, type the display name of your server.
4. Click **OK**.

1.10 Deleting the Display Name and the IP Address of a Server

You delete the display name of the server address and/or the IP address of a server from the list when you no longer need it.

For more information, see section 1.3 “Log on to WorkStation or WebStation” on page 17.

To delete the display name and the IP address of a server

1. **In the WorkStation window**, on the server addresses drop-down list box, highlight the IP address of the server you want to delete the settings of.
2. Click the **Delete** button  .

1.11 Exporting the List of the Display Names and IP Addresses of Servers

You export the list of the display names of server addresses and IP addresses of servers to share it with other users of WorkStation and help them organizing their own list of display names easier.

For more information, see section 1.3 “Log on to WorkStation or WebStation” on page 17.

To export the list of the display names and IP addresses of servers

1. **In the WorkStation window**, on the server addresses drop-down list box, click the **Export** button .
2. In the **Save as** dialog box, browse to the location where you want to save your file.
3. Click **Save**.

1.12 Importing a List of the Display Names and IP Addresses of Servers

You import a list of the display names and IP addresses of servers if you want to organize your display list easier.

For more information, see section 1.3 “Log on to WorkStation or WebStation” on page 17.

To import a list of the display names and IP addresses of servers

1. **In the WorkStation window**, on the server addresses drop-down list box, click the **Import** button .
2. In the **Open** dialog box, browse to the location where your file is saved.
3. Click **Open**.

The display names and IP addresses of servers from the imported file are now visible in the drop-down list box.

1.13 Clearing the List of the Display Names and IP Addresses of Servers

You clear the list of the display names and IP addresses of servers when you do not need the contents anymore.

For more information, see section 1.3 “Log on to WorkStation or WebStation” on page 17.

To clear list of the display names and IP addresses of servers

1. **In the WorkStation window**, on the server addresses drop-down list box, click the **Remove all** button .

The server addresses drop-down list box is now empty.

1.14 Changing Your Password

You change your EcoStruxure Building Operation user password on a regular basis to keep your information secure.

To change your password

1. In WorkStation, on the **File** menu, click **Change Password**.
2. In the **Change Password** dialog box, in the **Old Password** box, type your current password.
3. In the **New password** box, type your new password.
4. In the **Confirm password** box, type your new password again.
5. Click **OK**.

1.15 Logging Off WorkStation

You log off WorkStation so that unauthorized personnel cannot tamper with your settings. Logging off does not close WorkStation.

To log off WorkStation

1. In WorkStation, on the **File** menu, click **Log Off**.

1.16 Exiting WorkStation

You exit WorkStation to log off and close the application.

To exit WorkStation

1. In WorkStation, on the **File** menu, click **Exit**.

2 System Registration

What's in This Chapter?

2.1 System Registration

As the owner, you register your EcoStruxure BMS to ensure that you are informed of the latest product news, relevant offers, and system updates. This information enables you to optimize maintenance and functionality of your system, protect asset value, and produce a healthier building for optimal comfort conditions.

You register your EcoStruxure BMS online or offline through EcoStruxure Building Operation WorkStation. If you register online, the registration information you provide is displayed in the WorkStation and WebStation log on page.

For more information, see section 2.2 “Online Registration ” on page 26.

For more information, see section 2.5 “Offline Registration” on page 27.

You can verify and edit your registration details any time when needed.

There are several registration options:

- You can register a stand-alone Automation server.
- You can register an Enterprise Server together with connected Automation servers.
- You can register an Enterprise Central server together with connected Enterprise Servers and Automation servers.

Regardless of your system complexity, you register only the server from the top level of your hierarchy. Lower tier servers inherit registration information. The system will use the existing registration whenever possible.

2.1.1 Online Registration

You register an EcoStruxure BMS online when the EcoStruxure Building Operation WorkStation is connected to the Internet.

For more information, see section 2.2 “Online Registration ” on page 26.

2.1.2 Offline Registration

You register an EcoStruxure BMS offline when the system is not connected to the Internet. If there is no Internet connection, the system prompts you to offline registration.

For more information, see section 2.5 “Offline Registration” on page 27.

2.2 Online Registration

You register an EcoStruxure BMS online when the EcoStruxure Building Operation WorkStation is connected to the Internet.

After you register online, the registration information you provided is displayed at the WorkStation and WebStation logon page.

2.3 Registering an Online System

You register an EcoStruxure BMS online when the system is connected to the Internet.

For more information, see section 2.2 “Online Registration ” on page 26.

To register an online system

1. On the **WorkStation** logon page, in the **User name** box, type a user name.
2. In the **Password** box, type the password.
3. Click **Register**.
4. At the registration website, at the **Installation and System Information** page, in the **Site/building name** box, type the site/building name where the system is being installed.

   NOTE: Required information is marked with a red star.
5. In the **Site company name** box, type the company name.
6. In the **Site/building address** box, type the site or the building address.
7. In the **Country** box, select the country to which the site or the building belongs.
8. In the **State/province** box, select the state or the province to which the site or the building belongs.
9. In the **City** box, select the city to which the site or the building belongs.
10. In the **Zip/postal code** box, type the zip or the postal code.
11. In the **Email address** box, type the email address.
12. In the **Confirm email** box, type the email address again.
13. In the **Segment /application** section, select the business segments you belong to.

14. Click **Submit**.

    NOTE: A confirmation of your registration is sent to the email address you provided.

2.4 Editing Registration of an Online System

You edit your Installation and System Information to update your contact information.

For more information, see section 2.2 “Online Registration ” on page 26.

To edit registration of an online system

1. On the **WorkStation** logon page, in the **User name** box, type a user name.
2. In the **Password** box, type the password.
3. Click **Edit registration**.
4. At the registration website, at the **Installation and System Information** page, in the **Site/building name** box, type the site/building name where the system is being installed.

   NOTE: Required information is marked with a red star.
5. In the **Site company name** box, type the company name.
6. In the **Site/building address** box, type the site or the building address.
7. In the **Country** box, select the country to which the site or the building belongs.
8. In the **State/province** box, select the state or the province to which the site or the building belongs.
9. In the **City** box, select the city to which the site or the building belongs.
10. In the **Zip/postal code** box, type the zip or the postal code.
11. In the **Email address** box, type the email address.
12. In the **Confirm email** box, type the email address again.
13. In the **Segment /application** section, select the business segments you belong to.
14. Click **Submit**.

    NOTE: A confirmation of your registration is sent to the email address you provided.

You now updated your contact information.

2.5 Offline Registration

You register an EcoStruxure BMS offline when the system is not connected to the Internet. If there is no Internet connection, the system prompts you to offline registration.

When you register offline, you access the registration website on a computer that has Internet access.

After you register offline, the registration information you provided is not displayed at the WorkStation and WebStation logon page.

2.6 Registering an Offline System

You register an EcoStruxure BMS offline when the system is not connected to the Internet.

For more information, see section 2.5 “Offline Registration” on page 27.

To register an offline system

1. On the **WorkStation** logon page, in the **User name** box, type a user name.
2. In the **Password** box, type the password.
3. Click **Register**.
4. In the **Registering Your System Offline** dialog box, observe the **System Identifier**.
5. In a computer with Internet in the browser go to https://registration.smartstruxure.schneider-electric.com/ebo
6. In the **Registering an Offline System** window, in the **System ID** box, type the system identifier.
7. At the registration website, at the **Installation and System Information** page, in the **Site/building** name box, type the name of the site or of the building where the system is being installed.

   NOTE: Required information is marked with a red star.
8. In the **Site company name** box, type the company name.
9. In the **Site/building address** box, type the site or the building address.
10. In the **Country** box, select the country to which the site or the building belongs.
11. In the **State/province** box, select the state or the province to which the site or the building belongs.
12. In the **City** box, select the city to which the site or the building belongs.
13. In the **Zip/postal code** box, type the zip or the postal code.
14. In the **Email address** box, type the email address.
15. In the **Confirm email** box, type the email address again.
16. In the **Segment/application** section, select the business segments you belong to.

17. Click **Submit**.

    NOTE:

    - A confirmation of your registration is sent to the email address you provided.
    - WorkStation and WebStation display information that your system is registered, but do not display registration details.

2.7 Editing Registration of an Offline System

You edit your Installation and System Information to update your contact information.

For more information, see section 2.5 “Offline Registration” on page 27.

To edit registration of an offline system

1. In a computer with Internet, in the browser, go to http://qa-registration.smartstruxure.schneider-electric.com
2. In the **Registering an Offline System** window, in the **System ID** box, type the system identifier.
3. At the registration website, at the **Installation and System Information** page, in the **Site/building name** box, type the site/building name where the system is being installed.

   NOTE: Required information is marked with a red star.
4. In the **Site company name** box, type the company name.
5. In the **Site/building address** box, type the site or the building address.
6. In the **Country** box, select the country to which the site or the building belongs.
7. In the **State/province** box, select the state or the province to which the site or the building belongs.
8. In the **City** box, select the city to which the site or the building belongs.
9. In the **Zip/postal code** box, type the zip or the postal code.
10. In the **Email address** box, type the email address.
11. In the **Confirm email** box, type the email address again.
12. In the **Segment /application** section, select the business segments you belong to.
13. Click **Submit**.

    NOTE:

    - A confirmation of your registration is sent to the email address you provided.

You now updated your contact information.

3 Workspaces

What's in This Chapter?

3.1 User Experience

The Work area in the EcoStruxure Building Operation user interfaces may vary depending on how it is set up. A typical EcoStruxure Building Operation workspace contains panes and views.

3.1.1 Workspaces

The workspace in WorkStation and WebStation is the area where you perform all tasks at your site, such as acknowledging alarms and viewing trend logs.

For more information, see section 3.2 “Workspaces” on page 31.

3.1.2 Different Layouts Using Panes

A pane is a separate area in the workspace. You use panes to carry out commands, navigate the system or display information. Panes can be moved, hidden, closed, and repositioned.

For more information, see section 3.4 “Different Layouts Using Panes” on page 32.

3.1.3 WorkStation Shortcut keys

To ease the daily operation, you can use shortcut keys to most of the commands inWorkStation.

For more information, see section 3.5 “Keyboard Shortcuts for WorkStation” on page 34.

3.1.4 Windows

You can navigate between the available open windows in the Work area. The windows you can select using the Window menu are represented by tabs in the Work area.

For more information, see section 3.7 “Window Menu” on page 36.

3.2 Workspaces

The workspace in WorkStation and WebStation is the area where you perform all tasks at your site, such as acknowledging alarms and viewing trend logs.

The workspace is made up of different components, such as panes, lists, and views. These components can be configured in a number of different ways. You can hide or display components and create and save your own workspace. You can also reset the workspace layout to the default layout for the user group your user account belongs to.

WebStation uses cookies to remember your workspace when you log off. When you log on again, you get the workspace you used when you logged off. If you clear your web browser, you will regain the default workspace.

Some objects have specific views in WorkStation and WebStation:

- Alarms
- Documents
- Graphics (TGML)
- Events
- Trend Charts
- Trend Log Lists
- Schedules
- Calendars
- Watch

When you open an object that does not have a specific view, the Properties dialog box for that object is displayed.

3.2.1 Panels

Panels are a way to create workspaces that display two or more components in the EcoStruxure Building Operation software, for example graphics, trend charts, trend list and alarm views.

For more information, see the *Panels* topic on WebHelp.

3.2.2 Favorite Pages

You can add pages that you often visit as favorite pages. This makes the favorite pages more accessible.

For more information, see the *Favorite Pages* topic on WebHelp.

3.2.3 External Contents

External contents, such as web pages, cannot be opened inside WebStation for security reasons.

3.3 Switching Workspaces

You switch workspaces when you want to use another workspace, such as one with predefined functionality.

For more information, see section 3.2 “Workspaces” on page 31.

To switch workspaces

1. In WorkStation, on the **View** menu, point to **Workspaces**, and then click the workspace you want to switch to.

3.4 Different Layouts Using Panes

A pane is a separate area in the workspace. You use panes to carry out commands, navigate the system or display information. Panes can be moved, hidden, closed, and repositioned.

A pane is integrated into the WorkStations workspace and can be moved around inside the workspace. You can move a docked pane by dragging the pane in the Work area. A blue rectangle shows where the pane can be placed.

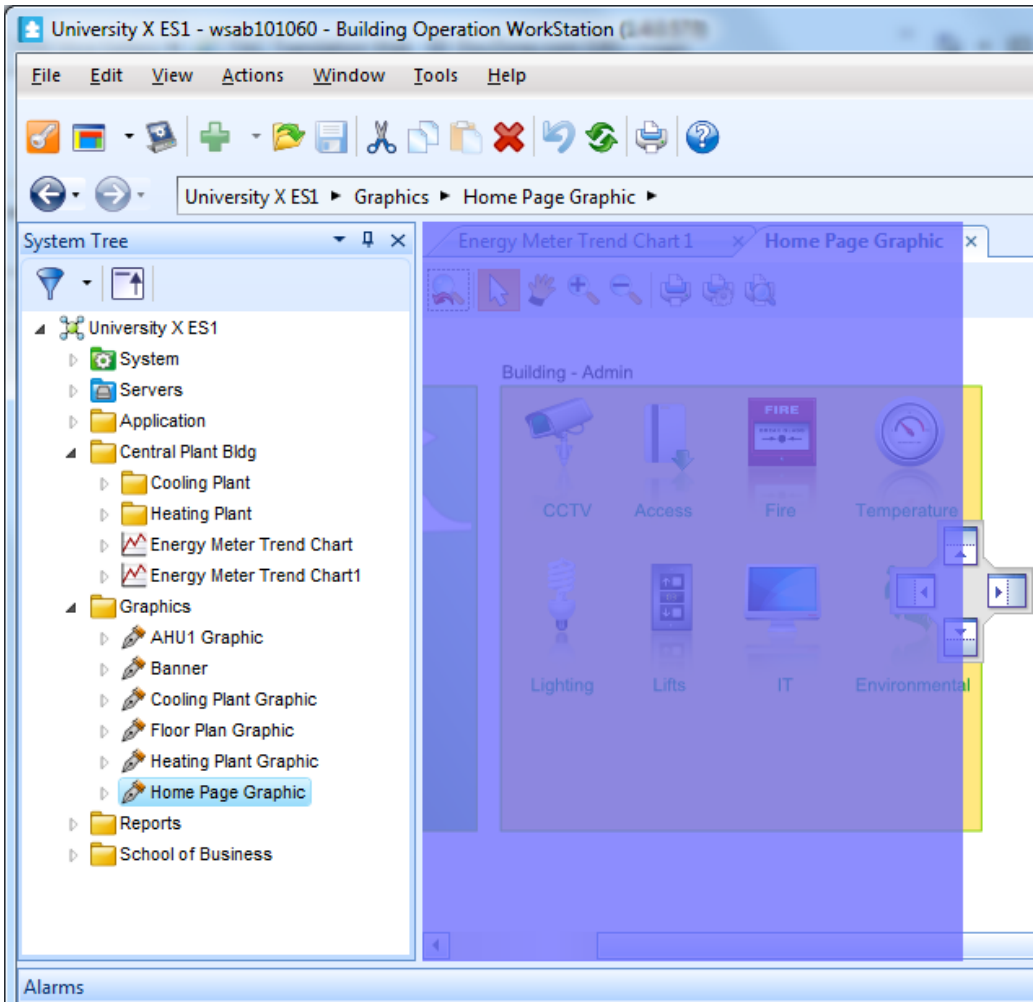


Figure – Docked panes in WorkStation

The docking tool helps you to position and reposition a pane.

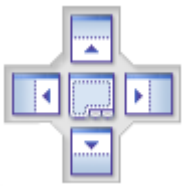


Figure – Docking tool

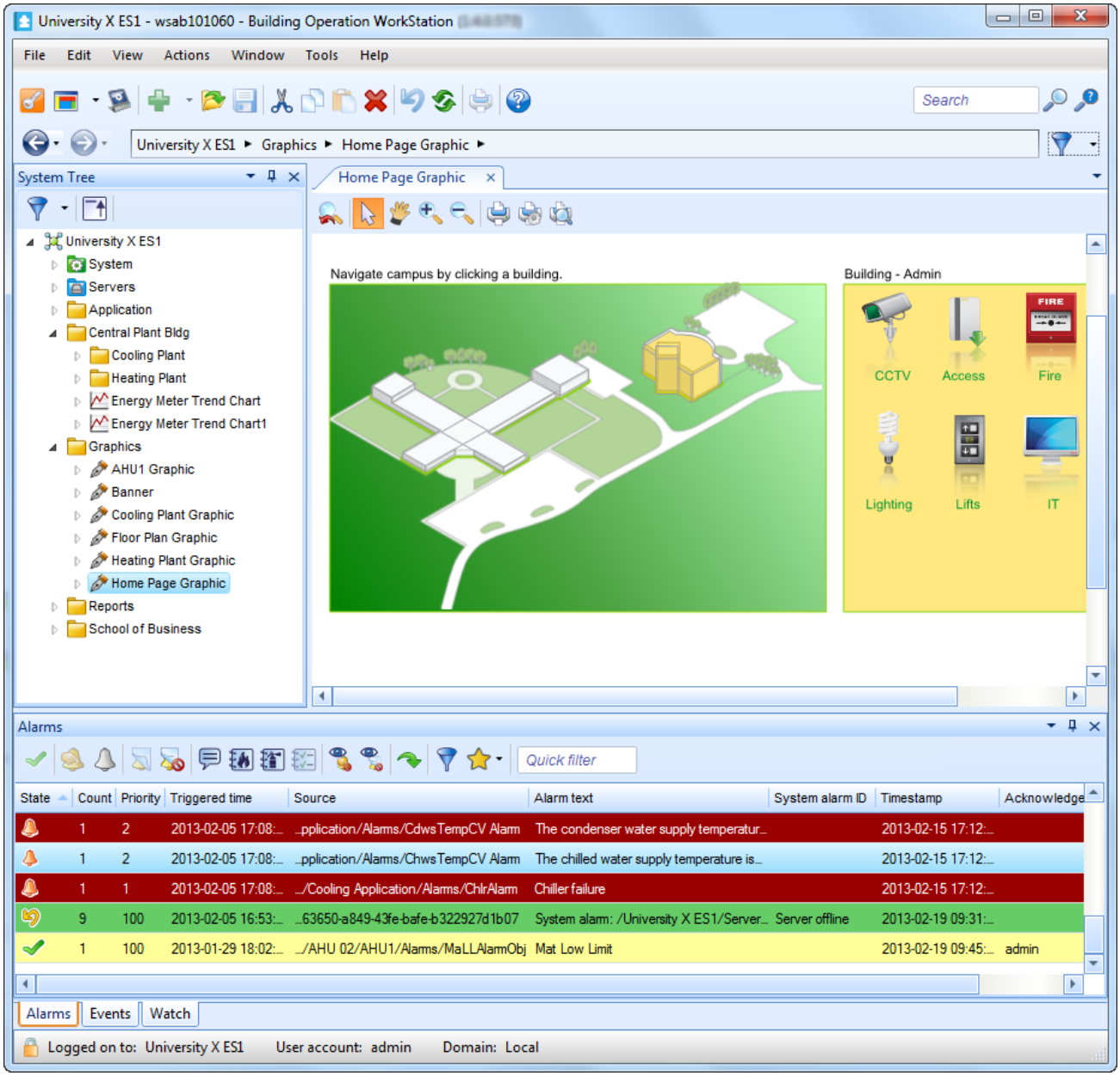


Figure – Docked panes. System Tree pane (left), a graphic in the Work area (right) and the Alarms pane (bottom).

Auto Hidden Pane

An auto hidden pane is hidden in the workspace with the exception of a tab with the name of the pane. When you place the cursor over the tab the pane will expand and be visible.

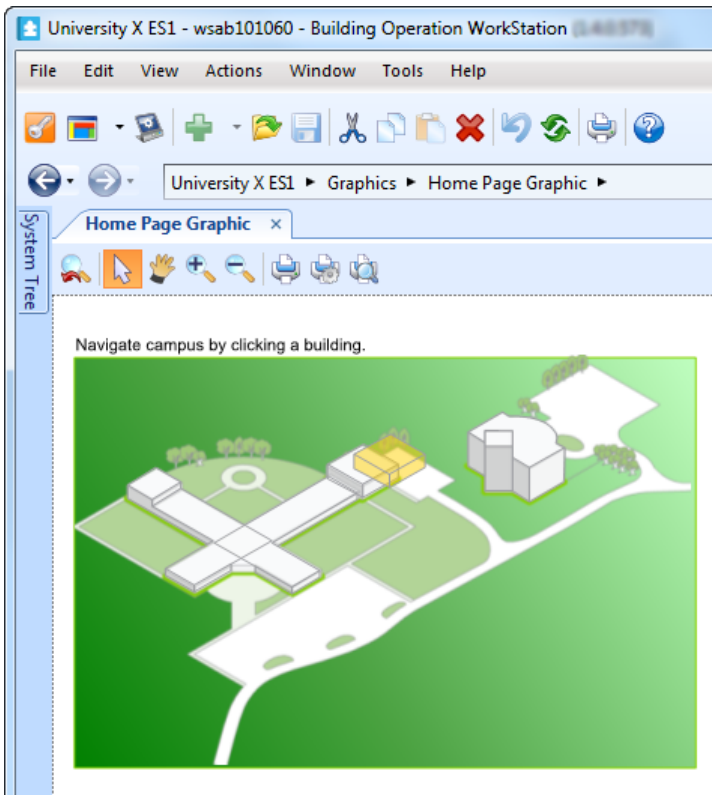


Figure – An auto hidden pane is only represented in by a tab, in this case the System Tree pane

Hidden Pane

A Hidden pane is completely hidden in WorkStation. The only way to make it visible is to select it in the View menu.

Resizing a Pane

Panes can be resized by moving the borders of the pane.

3.5 Keyboard Shortcuts for WorkStation

To ease the daily operation, you can use shortcut keys to most of the commands inWorkStation.

Shortcut key	Command
Ctrl + Tab	Shift between tabs
F1	Open help
F2	Rename

Continued

Shortcut key	Command
F3	Open Search
F5	Refresh
F11	Change normal mode and full screen mode
Ctrl + A	Select all
Ctrl + B	Edit bindings
Ctrl + D	Deselect all
Ctrl + E	Edit
Ctrl + Shift + E	Action -->View --> Events
Ctrl + N	New ...
Ctrl + O	Open
Shift + O	Open in new window
Ctrl + P	Print ...
Ctrl + R	Properties
Ctrl + Shift + R	Shortcut Properties
Ctrl + S	Save
Ctrl + Shift + S	Save as ...
Ctrl + X	Cut
Ctrl + Z	Cancel
Ctrl + V	Paste
Ctrl + Shift + V	Paste as shortcut
Ctrl + W	Save workspace layout
Del	Delete
Ctrl + F2	Print Preview
Alt + F4	Exit
Shift + F4	Close Window
Ctrl + Shift + F4	Close all windows
Ctrl + 1	Alarms pane
Ctrl + 2	System Tree pane
Ctrl + 3	Events pane
Ctrl + 4	Watch pane
Alt + -->	Forward (history)
Alt + <--	Back (history)

3.6 Selecting a Default Workspace

You select the workspace that you want to use when you log on to WorkStation for the first time.

For more information, see section 3.2 “Workspaces” on page 31.

To select a default workspace

1. In **WorkStation**, in the **Select Default Workspace** dialog box, click the workspace you want to use as your default workspace.

The selected workspace is your default workspace the next time you log on to WorkStation.

3.7 Window Menu

You can navigate between the available open windows in the Work area. The windows you can select using the Window menu are represented by tabs in the Work area.

The objects in the Window menu reflects the open Windows in the Window pane.

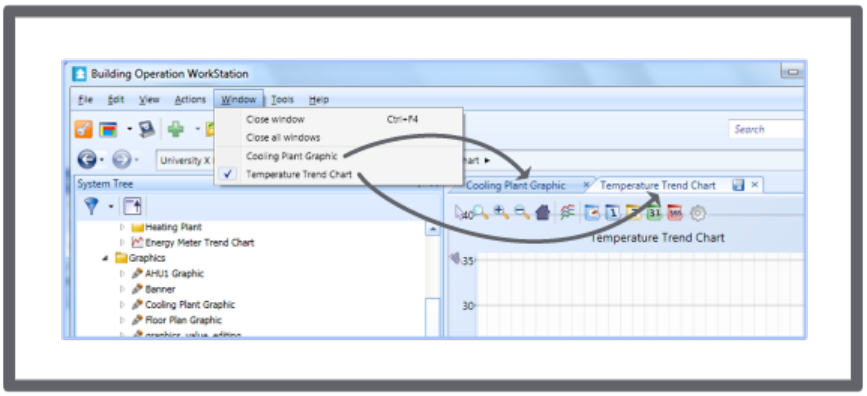


Figure – You can use the Windows menu to navigate between open windows in the Work area.

4 Modifying the Workspace Layout

What's in This Chapter?

4.1 Customization

In WorkStation you can customize your workspace to some extent. You can, for example, decide where workspace components, such as, Alarms are displayed.

You can configure the workspace layout, for example, to display different workspace items on different monitors or to change the size of a pane to improve readability. When you save the modified workspace layout, it is saved on the local computer. If you log on to WorkStation on another computer you cannot access the customized layout. The modified workspace layout is displayed the next time you log on to WorkStation.

You can switch the following bars on or off:

- Address bar
- Menu bar
- Toolbar
- Status bar
- Search bar
- History bar

For each window, pane, or work area in the workspace the user can modify the following:

- Auto hide on/off
- Closed on/off
- Floating on/off
- Position

You can reset a modified workspace layout on the local computer. In this case, you return to the default workspace layout that applies for your user account.

4.2 Increase the Work Area in WorkStation

You can increase the Work area in WorkStation by using Full screen mode and hiding toolbars and panes.

4.2.1 Hide Toolbars and Panes

You can increase the work area in WorkStation by hiding some or all of the toolbars and panes. Most functions can still be reached using the right-click method. All toolbars and panes that are hidden can be displayed again at any time.

In this example, the System Tree pane, Address bar, Basic toolbar, and Main menu are hidden.

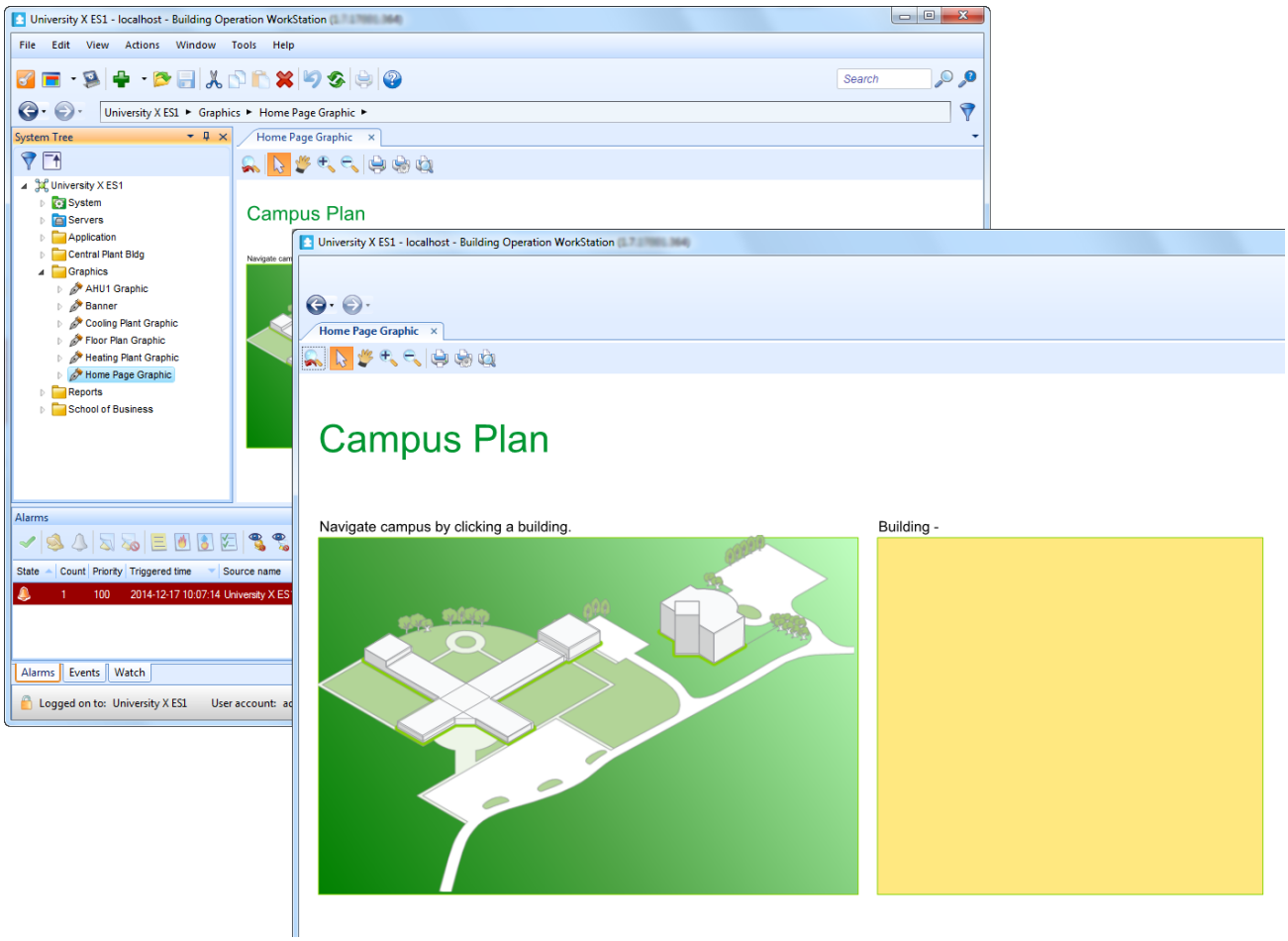


Figure – Default workspace (top left) and a workspace with the System Tree pane, Address bar, Basic toolbar, and Main menu hidden (bottom right).

4.2.2 Full Screen Mode

To further increase the Work area you can use Full screen mode. This function maximizes the window in focus to fill the whole screen. This is a good function to use, for example, when you work in large graphics with lots of information.

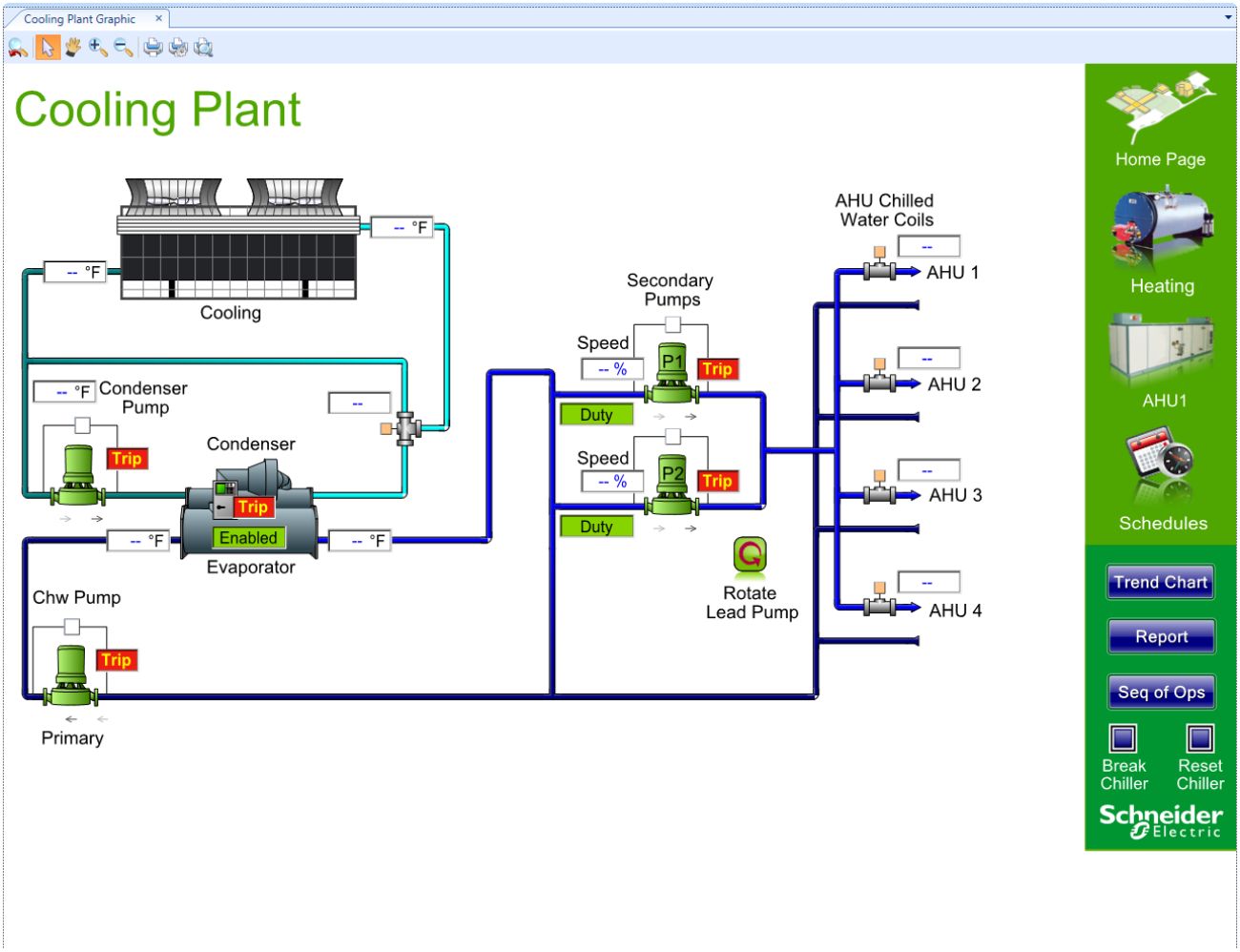


Figure – Full screen mode

4.3 Using Full Screen Mode

You use full screen mode to maximize the Work area so that you get a better view.

For more information, see section 4.2 “Increase the Work Area in WorkStation” on page 38.

To use full screen mode

1. In WorkStation, on the **Main Menu**, click **View**, and then click **Full screen**.

4.4 Returning from Full Screen Mode

You return to normal mode from full screen mode when you want to access toolbars and panes.

For more information, see section 4.2 “Increase the Work Area in WorkStation” on page 38.

To return from full screen mode

1. Press F11 on the keyboard.

4.5 Hiding Menus and Toolbars

You hide the main menus and toolbars if you do not use them or think they take up to much space.

For more information, see section 4.2 “Increase the Work Area in WorkStation” on page 38.

To hide menus and toolbars

1. In WorkStation, click **View**, point to **Toolbars**, and then click the menus and toolbars you want to hide.

4.6 Hiding Panes

You hide panes if you do not use them or think they take up too much space.

For more information, see section 3.2 “Workspaces” on page 31.

To hide panes

1. In WorkStation, click **View** and then click the panes you want to hide.

4.7 Resetting the Workspace Layout

You reset the workspace layout to return to the default workspace layout for your user account.

For more information, see section 4.1 “Customization” on page 37.

To reset the workspace layout

1. In WorkStation, on the **View** menu, click **Reset workspace layout**.

The workspace layout is reset to the default workspace for your user account.

4.8 Resetting All User Settings

You reset all user settings to clear all modifications you have made to WorkStation on the local computer and return to the default settings that apply for your user account.

For more information, see section 4.1 “Customization” on page 37.

To reset all user settings

1. In WorkStation, on the **Tools** menu, click **Options**.
2. Click **Reset all user settings**.
3. Click **OK**.

4.9 Showing a Hidden Main Menu

You show a hidden main menu when you want it to be visible.

For more information, see section 4.1 “Customization” on page 37.

To show a hidden Main menu

1. In WorkStation, right-click the toolbar and then select **Main menu**.

5 Filtering and Grouping

What's in This Chapter?

5.1 Basic Functions

To get a better view of the objects in views and lists, you can use a number of functions like filtering, grouping, and sorting.

5.1.1 Filter Objects Using Column Headings

You can filter objects on the properties available for each displayed column in panes and views. This makes it easier to get an overview of all objects.

For more information, see section 5.2 “Filter Objects Using Column Headings” on page 43.

5.1.2 Columns

In WorkStation, panes and views present information in lists. You can customize the contents of the lists by adding and removing columns.

For more information, see section 5.5 “Columns” on page 44.

5.1.3 Group and Sort Objects

You can group objects using the group function in a pane or View.

For more information, see section 5.7 “Group and Sort Objects” on page 46.

5.1.4 Quick Filter

Using the Quick filter you can filter objects on all properties in a pane or View. Filtering can be done on whole words down to solitary letters.

For more information, see section 5.11 “Quick Filter ” on page 49.First para

5.1.5 Alarm and Event Detail View

Use the **Detail view** to view all properties of a selected alarm or event.

For more information, see section 21.51 “Alarm and Event Detail View ” on page 265.

5.1.6 Show Abbreviated References

References in the List view are abbreviated to save space. An abbreviated reference might only display the first part of the reference but sometimes the last part is the most important one. You can have the system only show the last part of the reference in the list.

For more information, see section 5.12 “Show Abbreviated References” on page 51.

5.2 Filter Objects Using Column Headings

You can filter objects on the properties available for each displayed column in the List View. This makes it easier to get an overview of all objects.

You filter the objects using the filter function in the column heading. You select the criteria in the filter drop-down list.

For example, you can filter on all objects that are set to '21' in the Value column in the List View.

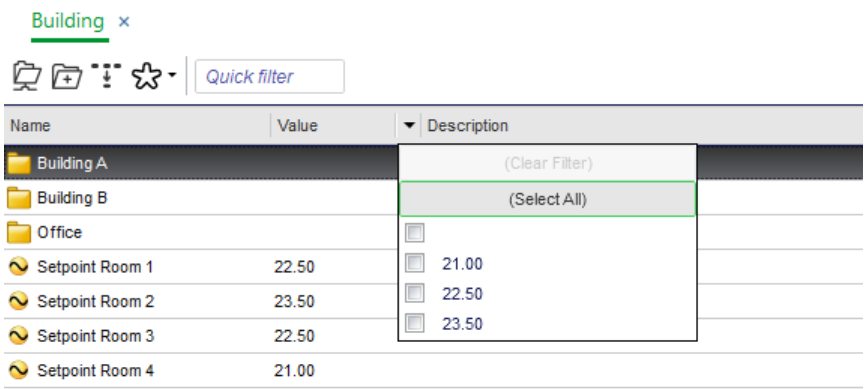


Figure – The filter function in the List View in WorkStation

You can filter objects in the following panes and views in WorkStation:

- List View
- Alarms pane
- Events pane
- Watch pane

You cannot filter the timestamp column. By default, the filter settings are not saved when you close the view or pane. You cannot save the filter settings in Favorites or in a Content type.

5.3 Filtering Objects

You filter objects in the List View in WorkStation when you want to reduce the number of displayed objects.

For more information, see section 5.2 “Filter Objects Using Column Headings” on page 43.

To filter objects

1. In WorkStation, click the arrow in the column heading.
2. Select the properties you want to display.

5.4 Clearing the Filter

Clear the filter when you do not need it anymore.

For more information, see section 5.2 “Filter Objects Using Column Headings” on page 43.

To clear the filter

1. In WorkStation, click the arrow in the column heading.
2. Click **(Clear filter)**.

5.5 Columns

In WorkStation, panes and views present information in lists. You can customize the contents of the lists by adding and removing columns.

Columns are available in the following views and panes:

- List View
- Alarms pane
- Alarm Views
- Events pane
- Event Views
- Watch pane
- Watch Views
- Trend Log List View

Column changes to the List View are automatically saved when you leave the view. You can save column changes to the Alarms pane, Alarm View, Events pane, or Event View as a standard layout or as a favorite depending on your permissions. You have to manually save column changes to the Watch pane and Watch Views before leaving the pane or view. Column changes to the Trend Log List View cannot be saved.

You use the column headings to sort information. For more information, see section 5.7 “Group and Sort Objects” on page 46.

The contents of the columns reflect the properties of the presented object in the pane or view. Using Quick filter, you can narrow the number of objects displayed in the list. For more information, see section 5.11 “Quick Filter ” on page 49.

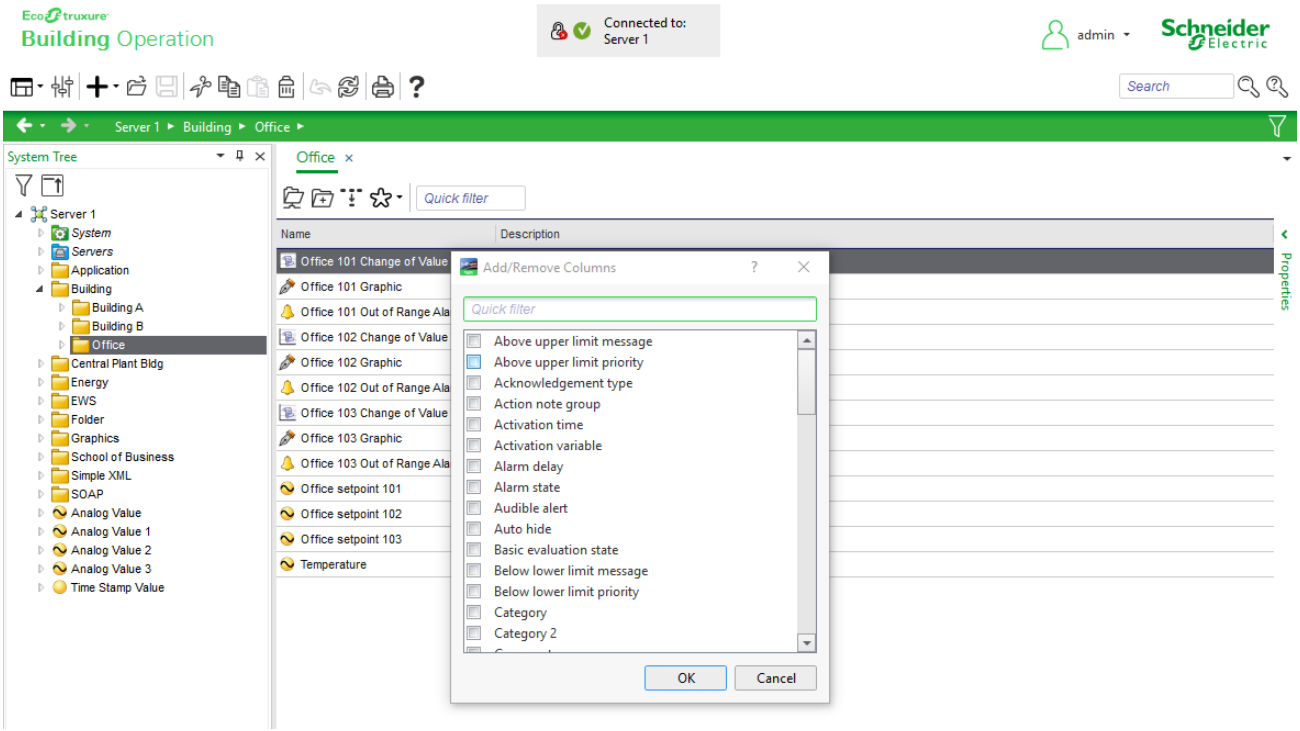


Figure – The Add/Remove Columns dialog box in WorkStation

5.6 Changing the Alarm State Sort Order

You change the sort order of the alarm states to display alarms in the Alarms pane or an Alarm View in the order you choose.

IMPORTANT:

- For the changes to be saved, you must have permissions to change the alarm state sort order.
- If you have permission to change the alarm state sort order, the change affects all users and all Alarm Views in the system.

For more information, see section 5.7 “Group and Sort Objects” on page 46.

To change the alarm state sort order

1. In WorkStation, right-click in the Alarms pane or in an Alarm View.
2. Point to **Alarm View settings** and then click **Alarm state sort order**.
3. In the **Alarm State Sort Order** dialog box, select the state you want to reposition.
4. Click the up or down arrow to change the sort order.
5. Repeat the operation to reposition other states.
6. Click **OK**.

If you have permission to change the alarm state sort order, the changes are saved for all users and all alarm views in the system. If you do not have permission to change the alarm state sort order, the change is temporary.

5.7 Group and Sort Objects

To get a better view of the objects in views and lists, you can use a number of functions like filtering, grouping, and sorting.

You can group objects to display them in a specific way, for example, by their priority or name. You can also add sub groups by adding new columns to a group.

You can change from descending to ascending sort order by using the small arrow in the column heading. You can also sort alarms on, for example, state or priority by adding columns that contain the information you want to sort by. You can sort on several columns by pressing SHIFT and then sorting a new column. The sorting is done in the order in which you added a new sorting.

Example:

You sort by alarm state and then priority. First of all the alarms are sorted by their state. If several alarms have the same state, they are sorted by priority.

Group and sort order changes to the List View are saved when you close or leave the list. You have to manually save other changes to panes and Views.

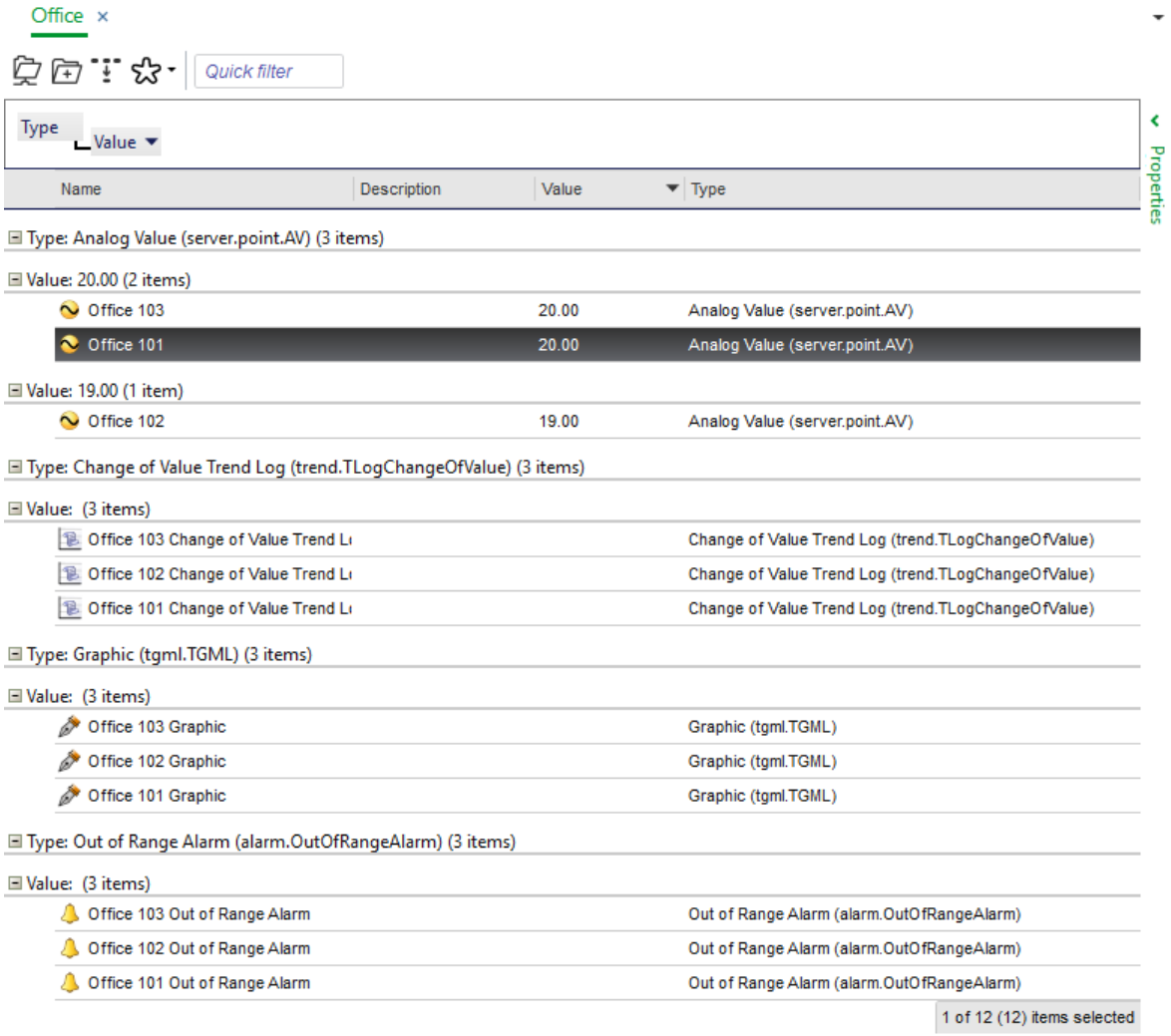


Figure – Objects in the List View grouped by Name and Value and sorted in ascending order

You can group and sort objects in the following panes and views in WorkStation:

- List View
- Alarms pane
- Alarm Views
- Events pane
- Event Views
- Watch pane
- Watch Views
- Trend Log List View

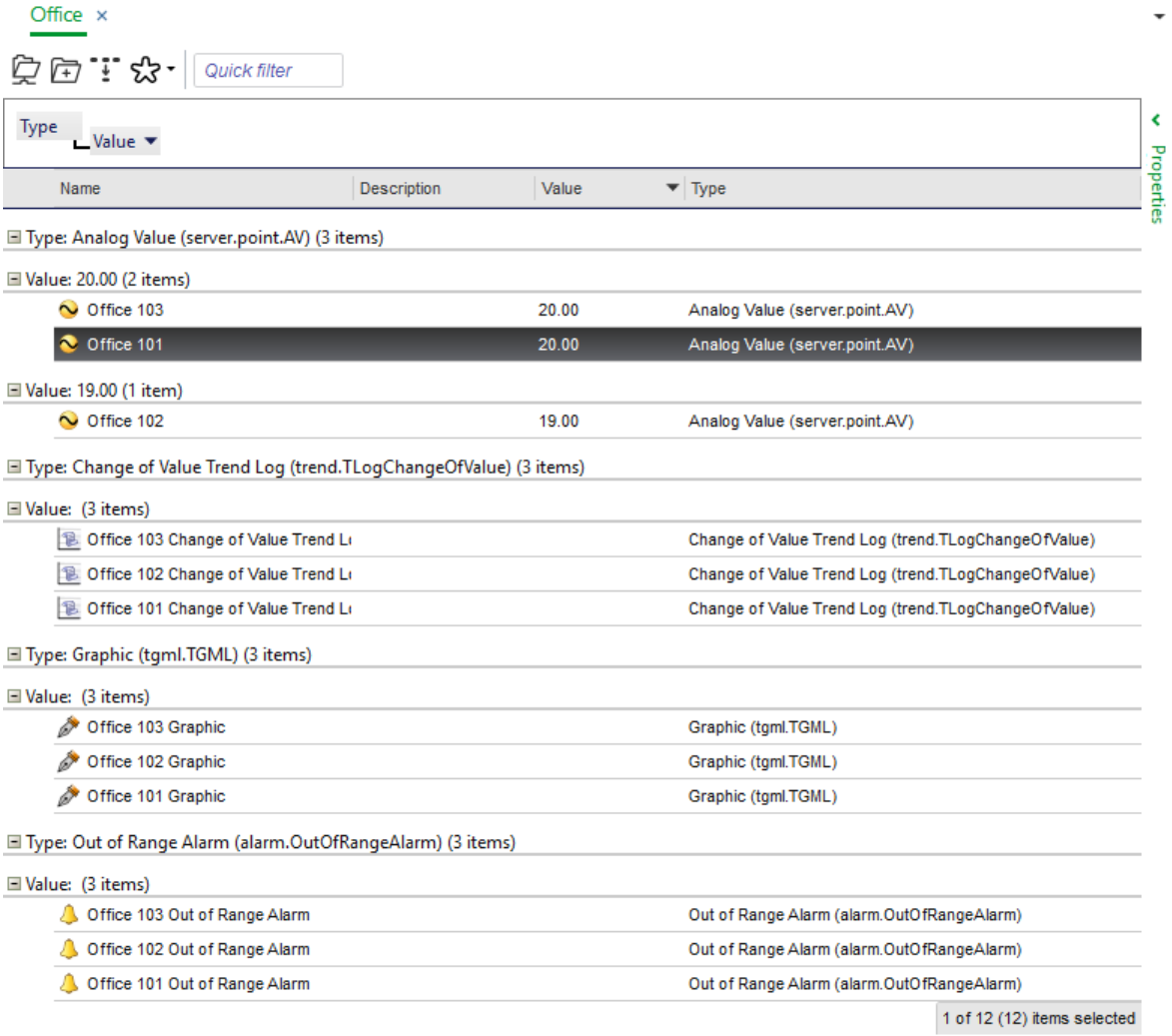
5.8 Grouping Objects

You group objects using the Group function to get a better overview of the objects, for example, in a folder or a list.

For more information, see section 5.7 “Group and Sort Objects” on page 46.

To group objects

1. In WorkStation, in the pane or View, right-click the column heading row and then click **Group box**.
2. Drag the column heading you want to group on to the group area.



You add more groups by dragging the column headings to the group area.

5.9 Sorting Objects

You sort objects to change the sort order the objects are presented in.

For more information, see section 5.7 “Group and Sort Objects” on page 46.

To sort objects

1. In WorkStation, in the pane or View, click the column heading.

5.10 Removing a Group

You remove a group and hide the group area when you do not need to use it anymore.

For more information, see section 5.7 “Group and Sort Objects” on page 46.

To remove a group

1. In WorkStation, drag the group label from the group area to the column heading row.
2. In the pane or view, right-click the column heading row and then clear **Group box**.

5.11 Quick Filter

You use Quick filter to filter out the objects by their names from the list. You can either type the name in the Quick filter box or drag an item from a column in the Alarms pane, the Events pane, an Alarm view, or an Event view and drop it in the Quick filter box.

For example, if you want to find all objects that are named “temperature”, just type “temp” in the Quick filter box and only objects named temperature are displayed in the list.

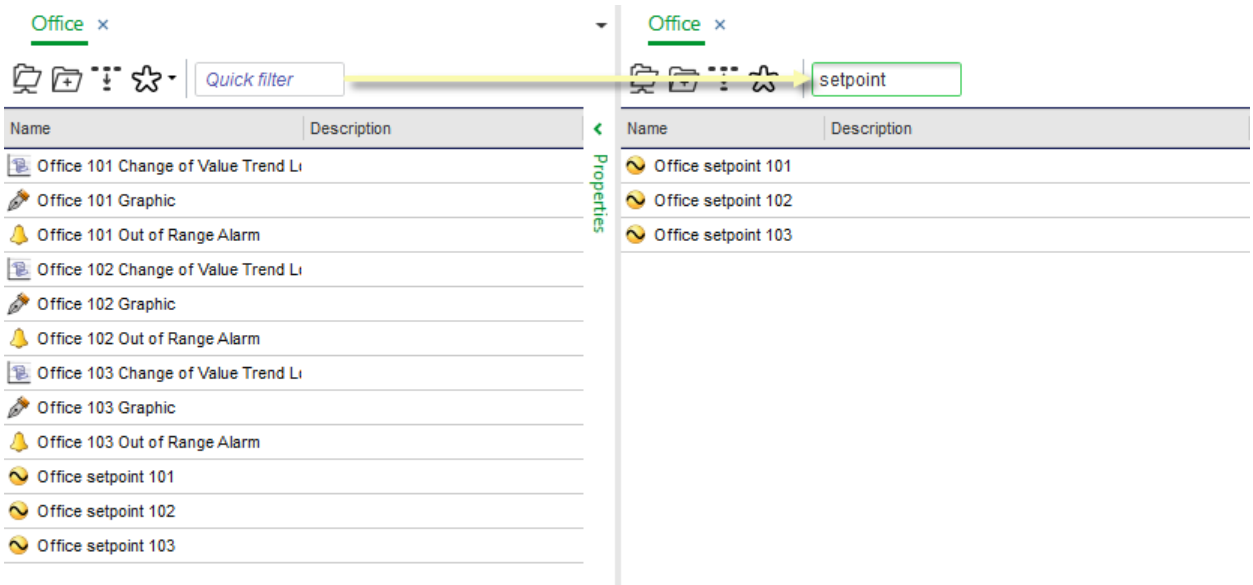


Figure – Filtering on characters in all visible columns

The Quick filter filters on everything that is visible in the columns of the view. For example, if you filter on “20” you do not get any hits. But if you add the column Value, you get hits on the temperature, which is 20, and the setpoint which is 20.

The Quick filter for the Event View filters on records that have already been retrieved from the server.

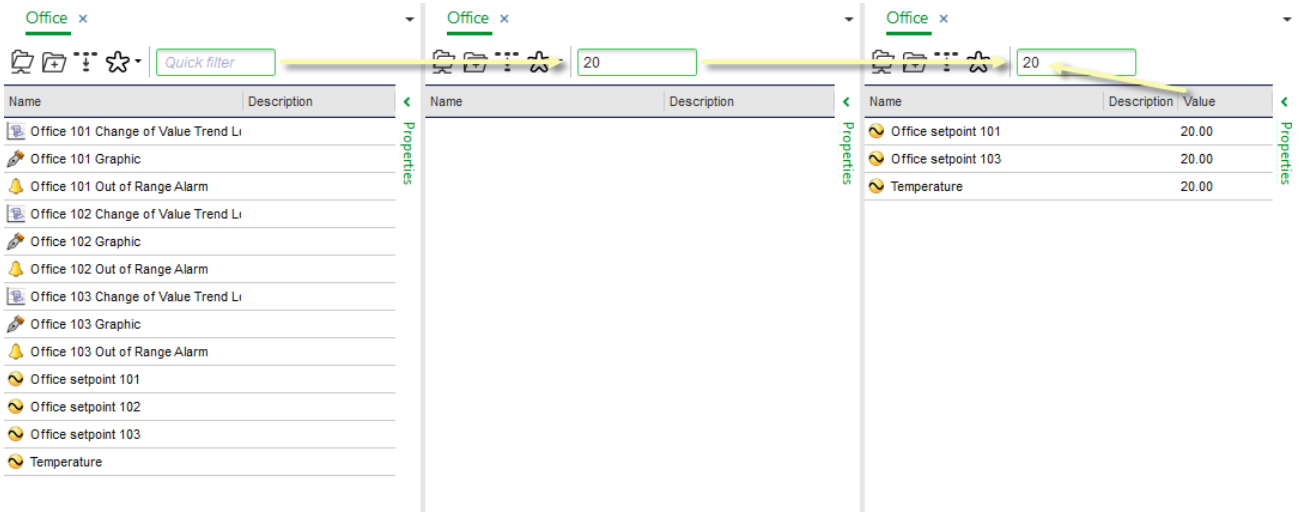


Figure – Quick filter filters on all visible columns in the view

Quick filter is used in the following components in WorkStation:

- List View
- Alarms pane
- Alarm Views
- Events pane
- Event Views
- Alarm or Event details views
- Watch pane
- Watch Views
- Add/Remove columns dialog box
- Create object wizard

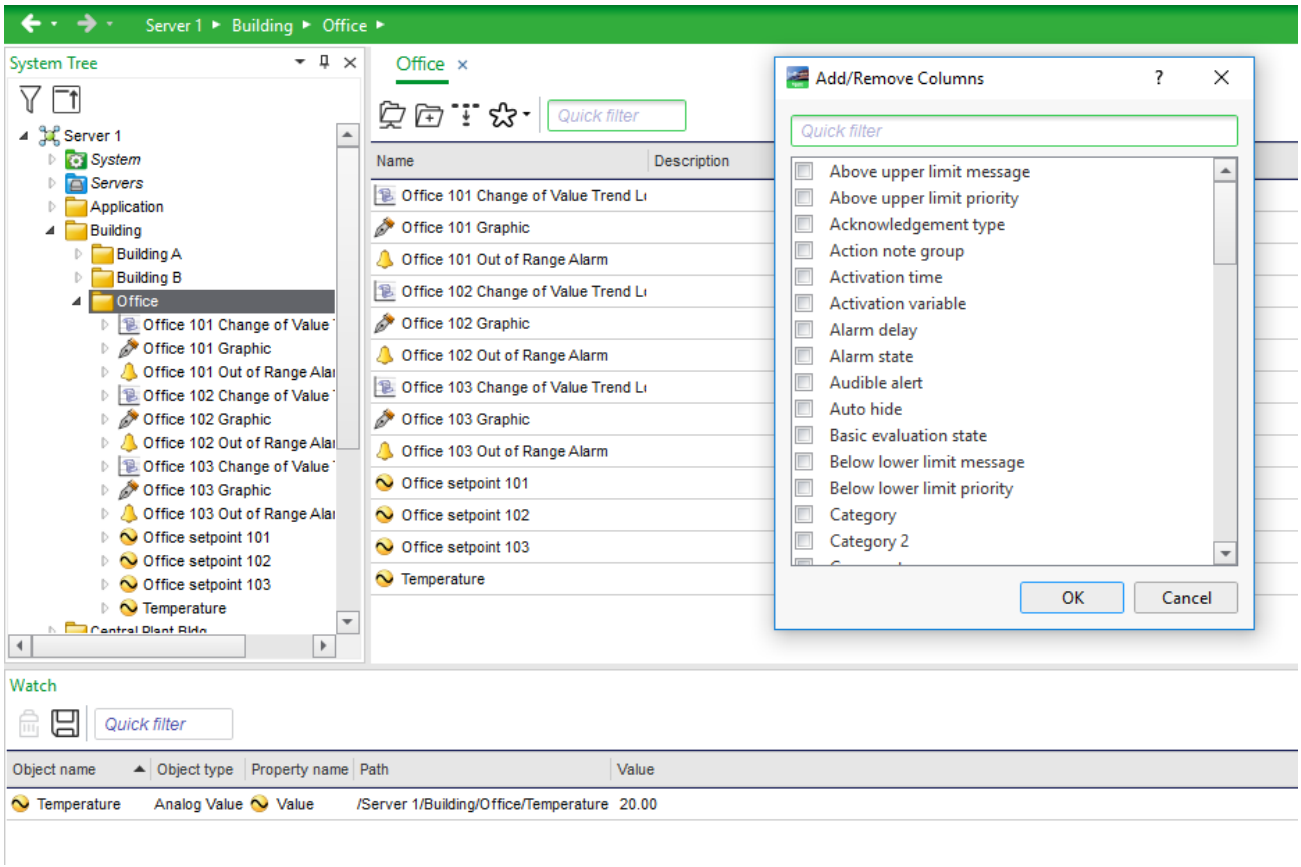


Figure – The Quick filter is used in many components, such as the List View (upper left), the Watch pane (bottom left), and the Add/Remove dialog box (upper right).

5.12 Show Abbreviated References

References in the List view are abbreviated to save space. An abbreviated reference might only display the first part of the reference but sometimes the last part is the most important one. You can have the system only show the last part of the reference in the list.

For example, if the full reference is ../../IO Resources/Onboard IO/DO 01 and you select to show abbreviated references, the list shows DO 01.

5.13 Showing Abbreviated References

You show abbreviated references to see the last part of the reference.

For more information, see section 5.12 “Show Abbreviated References” on page 51.

To show abbreviated references

1. In WorkStation, in the **List View**, click the **Show abbreviated references** button .

6 Modifying Values

What's in This Chapter?

6.1 Modify Values

You can change and force values using a graphic or the Properties pane. Using the Watch pane, you can dynamically monitor a value.

6.1.1 Forced Values

When you force a value, all input from the system is overridden. For example, a schedule is set to start a fan at 09:00 but you want it to start at 08:00. In this case, you can force the fan to start at 08:00.

For more information, see section 6.7 “Forced Values” on page 54.

6.1.2 Add and Change Units and Prefix

You can add or change units and prefixes on values using WebStation.

For more information, see the *Adding or Changing a Unit and Prefix for a Value in WebStation* topic on WebHelp.

6.2 Adding an Object to the Watch Pane or a Watch View

You add an object to the Watch pane or a Watch View to dynamically monitor its property changes.

For more information, see section 21.11 “Watch Pane and Watch View” on page 206.

To add an object to the Watch pane or a Watch View

1. In WorkStation, in the **System Tree** pane, select the object you want to monitor.
2. Drag the object to the **Watch** pane or a **Watch View**.

6.3 Saving a List of Values in the Watch Pane or a Watch View

You save lists of values in the Watch pane or a Watch View so that you can organize you monitored values into manageable collections.

For more information, see section 21.11 “Watch Pane and Watch View” on page 206.

To save a list of values in the Watch pane or a Watch View

1. In WorkStation, in the **Watch** pane or a **Watch View**, on the toolbar, click the **Save current settings** button  .
2. Enter a **Name** and a location for the list.
3. Click **Save**.

6.4 Monitoring a Non-default Property

You add a value to the Watch pane and select the property to monitor when you do not want to monitor the default property.

For more information, see section 21.11 “Watch Pane and Watch View” on page 206.

To monitor a non-default property

1. In WorkStation, in the **System Tree** pane, select the value.
2. On the **Actions** menu, point to **View**, point to **Watch** pane, and then click **Select property**.
3. In the **Select property** dialog box, select the property you want to monitor.
4. Click **OK**.

6.5 Removing an Object from the Watch Pane or a Watch View

You remove an object from the Watch pane or a Watch View when you no longer want to monitor its property changes.

For more information, see section 21.11 “Watch Pane and Watch View” on page 206.

To remove an object from the Watch pane or a Watch View

1. In WorkStation, in the **Watch** pane or a **Watch View**, select the object you want to remove.
2. Click **Remove from Watch Window**  .

The object is removed from the Watch pane or Watch View but not deleted from EcoStruxure Building Operation database.

6.6 Changing a Value in a Graphic

You change a value in a graphic when you want a different value.

For more information, see section 19.1 “How Graphics Work” on page 185.

To change a value in a graphic

1. In WorkStation or WebStation, click the graphic with the value you want to change.
2. Click the value you want to change.
3. In the Edit properties dialog box, enter the new value.
4. Click **OK**.

6.7 Forced Values

When you force a value, all input from the system is overridden. For example, a schedule is set to start a fan at 09:00 but you want it to start at 08:00. In this case, you can force the fan to start at 08:00.

You can manually release a forced value at any time or you can automate the release, using a Timed Force utility object to specify the duration or end time of the force. For more information, see the *Timed Force Objects* topic on WebHelp.

When you release a forced value, the value returns to its normal status.

In WorkStation, you can view the unforced value, which is the real value from the system, at any time. For more information, see section 6.11 “Viewing an Unforced Value ” on page 56.

Timeout on forced values

You can set a timeout on forced values so that the forced value is automatically unforced after a fixed time. The time can be a duration, for example two hours. The forced value can also be unforced at a specific calendar date and time.

For more information, see section 6.10 “Setting a Timeout on a Forced Value” on page 55.

For more information, see the *Setting a Timeout on a Forced Value* topic on WebHelp.

Indication in WorkStation

A forced value is indicated by orange color in the properties dialog boxes. In in the Watch pane, a forced value is indicated by a pointing hand  .

In the List View and Search View, a forced value is indicated by the text [Forced] in the 'Value' column.

In WorkStation, you can view the unforced value, which is the real value from the system, at any time. For more information, see section 6.11 “Viewing an Unforced Value ” on page 56.

Indication in WebStation

A forced value is indicated by orange color and a pointing hand in the List view.

Indication in Function Block Graphics Viewer

A forced value is indicated by orange color in Function Block Graphics Viewer. For more information, see the *Forced Value Indication in Function Block Graphics Viewer* topic on WebHelp.

Search for forced values

You can search for forced values using the search function in WorkStation.

For more information, see section 6.12 “Searching for Forced Values” on page 56.

You can search for forced values in WebStation using Diagnostics.

For more information, see the *Searching for Forced Values in WebStation* topic on WebHelp.

6.8 Forcing a Value

You force a value when you want to override a value, such as a value from a device.

For more information, see section 6.7 “Forced Values” on page 54.

To force a value

1. In WorkStation, in the **System Tree** pane, select the value you want to force.
2. On the **File** menu, click **Properties**.
3. Change the value.
4. Click **Force**.
5. Click **OK**.

6.9 Releasing a Forced Value

You release a forced value to return to its normal status.

For more information, see section 6.7 “Forced Values” on page 54.

To release a forced value

1. In WorkStation, in the **System Tree** pane, select the forced value you want to release.
2. On the **File** menu, click **Properties**.
3. Click **Unforce**.
4. Click **OK**.

6.10 Setting a Timeout on a Forced Value

You set a timeout on a forced value when you want the value to be unforced automatically at a fixed time.

For more information, see section 6.7 “Forced Values” on page 54.

To set a timeout on a forced value

1. In Workstation, click the value you want to set a timeout on.
2. In the value row, click **Force**.
3. Click the **Set timeout** button.
4. Chose if you want a duration of the forced value or if you want the value to be unforced on specific date and time.
5. Click **OK**.
6. Click **Save**.

6.11 Viewing an Unforced Value

You view an unforced value of a forced value when you want to see the real value.

For more information, see section 6.7 “Forced Values” on page 54.

To view an unforced value

1. In **WorkStation**, in the **System Tree** pane, select the forced value.
2. On the **File** menu, click **Properties**.
3. Click **Configure**  .
4. Click the **Operations** tab.
5. In the **Unforced value** box, view the unforced value.

6.12 Searching for Forced Values

You search for forced values to determine if the system runs normally and to reset forced values. Manually overridden I/O points are not included in the search result.

For more information, see section 6.7 “Forced Values” on page 54.

To search for forced values

1. In WorkStation, on the Toolbar, click the **Search** button  .
2. In the **Search** view, in the text box, type your search.

   NOTE: To search for all forced values, type '*'.
3. In the **In folder** box, enter the folder where you want to start the search.
4. Select **Include subservers** to include automation subservers in the search.

   NOTE: Only subservers running EcoStruxure Building Operation BMS version 1.5 or higher are included in the search.
5. Select **Stop if more than 1000 results** to limit the search to 1,000 results.

6. Select **Forced values only** to search for forced values that were forced from within the EcoStruxure BMS.
7. Select **In device** to include values forced from outside the EcoStruxure BMS in the search. For example, values forced on the device.
8. In the **Select Types** dialog box, in the **Include types** box, select object types to include in your search.
9. Click the **Add type** button  .
10. Click **OK**.
11. In the **Select Conditions** box, enter the search conditions that have to be met before a search result is displayed.
12. Click the **Add condition** button  and select the condition you want to use for the search.
13. Click **OK**.
14. Click the **Search** button  .

The forced values in the EcoStruxure BMS are displayed.

7 Help Functions

What's in This Chapter?

7.1 WorkStation Help

WorkStation Help provides you with information on how to handle and understand the EcoStruxure BMS.

There are two different Help systems in WorkStation:

- WebHelp
- System Reference Guide

WebHelp

WebHelp is a context sensitive online help. WebHelp is always up-to-date so that you get the latest version of Help. To be able to use WebHelp, you have to be connected to the Internet.

System Reference Guide

System Reference Guide is a PDF-file that is installed with WorkStation. System Reference Guide is not context sensitive or up-to-date with the latest Help information.

7.1.1 Help Settings

You can decide which Help you want to use as the default, using the **Help** menu in WorkStation. You can select the following settings:

- Automatic
- Building Operation help
- Building Operation guide

Automatic

Click to make WorkStation check if you are connected to the Internet. If you are connected, WebHelp opens. If you are not connected, the System Reference Guide opens.

Building Operation help

Click to always open WebHelp. If you are not connected to the Internet, you get an error message.

Building Operation guide

Click to always open the System Reference Guide, regardless of whether you are connected to the Internet or not.

7.1.2 Context Sensitive Help

Context sensitive help means that when you click on a help button or press F1 for a specific dialog box or view, you are directed to the specific topic that explains that dialog box or view. Only WebHelp is context sensitive.

7.2 Opening Help

You use help if you encounter difficulties in EcoStruxure Building Operation software.

For more information, see section 7.1 “WorkStation Help” on page 58.

To open help

1. In WorkStation, on the **Help** menu, click **Building Operation help (online version)**.

7.3 Getting Help on a Specific Topic

You click Help to get help on a specific topic.

For more information, see section 7.1 “WorkStation Help” on page 58.

To get help on a specific topic

1. Click the **Help** button  in the dialog box.

8 Alarms

What's in This Chapter?

8.1 How Alarms Work

You are notified by alarms when some important event occurs. For example, if the temperature is too low or too high in a building, if a window is open, or if something is broken, such as a fan. The system administrator sets up the alarms and decides to whom the alarm is sent.

When an alarm is triggered, the alarm is displayed in a list together with information about the alarm and its current status. In the list, you can manage the alarms, for example, acknowledge, accept, and comment alarms. In addition, you can sort, hide, and disable alarms in the list. You can also open a detail view to get information on all properties of an alarm.

8.1.1 Alarm Acknowledgements

When you acknowledge an alarm, you let other users know that you have seen the alarm. Acknowledging an alarm does not necessarily mean that you are responsible for solving the cause of the alarm.

For more information, see section 8.3 “Alarm Acknowledgements ” on page 63.

8.1.2 Alarm Assignments

A triggered alarm can be manually or automatically assigned to a specific user or user group that seems to be most suited to correct the problem.

For more information, see section 8.5 “Alarm Assignments” on page 63.

8.1.3 Alarm Attachments

You can add attachments to alarm objects, except System Information alarms. An attachment is a link pointing to an object in the system. When an alarm that has an attachment is triggered, a paperclip icon is displayed in the Alarms pane and Alarm Views. It is also possible to configure the attachment to display when the alarm is going from Normal to Alarm state.

For more information, see section 8.11 “Alarm Attachments” on page 66.

8.1.4 User Actions

User actions are used to ease the understanding of what triggered the alarms and what to do to solve the cause of the alarm. User action can be mandatory or optional depending on how the system is set up.

For more information, see section 9.1 “User Actions” on page 72.

8.1.5 Hide and Disable

You can hide or disable alarms to decrease the number of alarms that are presented in the Alarms pane or Alarm View. This is particularly useful when you have many active alarms at the same time.

For more information, see section 10.1 “Hide and Disable” on page 76.

8.1.6 Alarm State-change Logging

Every time an alarm changes its state, such as from alarm state to reset state, an event is written in the event log and shown in the Events pane in WorkStation. You can disable state-change logging if you are only interested in the current alarm status. For example, you want to present the current alarm status in a graphic and do not care about the event history.

For more information, see section 11.1 “Alarm State-Change Logging ” on page 80.

8.1.7 Alarm and Event Details

To quickly get all the details of a specific alarm or event in WorkStation, or an alarm in WebStation, you can use a Detail view. The Detail view always displays all properties that can be added and displayed in the Alarms pane, Events pane, Alarm View or Event View.

For more information, see section 8.2 “Alarm and Event Details” on page 62.

8.1.8 Temporary User Filters

You change the Alarms pane or Alarm View filter conditions to narrow what is displayed in the Alarms pane or Alarm View.

For more information, see section 8.13 “Temporary User Filters” on page 67.

8.1.9 Favorites

When you make layout or filter changes to the Alarms pane or an Alarm View, you can save the changes as a favorite. The purpose of the favorite is to quickly and temporarily change the Standard layout and narrow what is displayed in the Alarms pane or Alarm View by applying the favorite filter conditions.

For more information, see section 8.15 “Favorites” on page 68.

8.2 Alarm and Event Details

To quickly get all the details of a specific alarm or event in WorkStation, or an alarm in WebStation, you can use a Detail view. The Detail view always displays all properties that can be added and displayed in the Alarms pane, Events pane, Alarm View or Event View.

8.2.1 Alarm and Event Details in WorkStation

In WorkStation, you use the Detail view to display all the properties and their values for the selected alarm or event.

Use the Quick filter to limit the number of properties listed in the view.

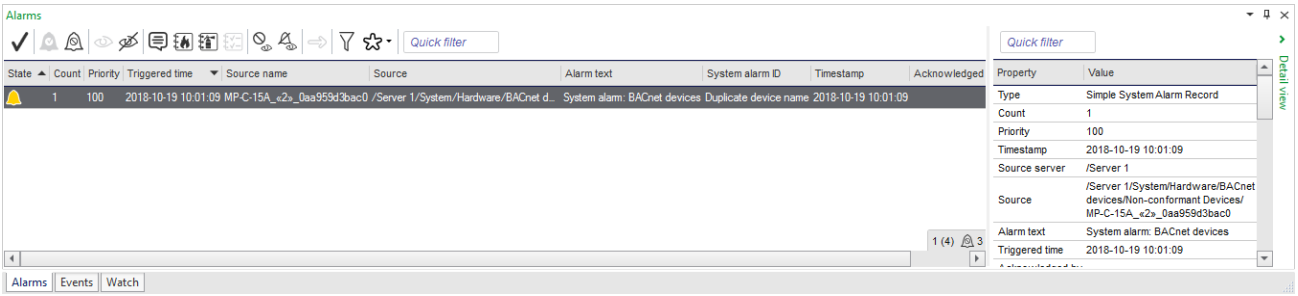


Figure – The Alarm Detail view (to the right) in WorkStation

8.2.2 Alarm and Event Details in WebStation

In WebStation, you use the Detail view to display all the properties and their values for the selected alarm or event.

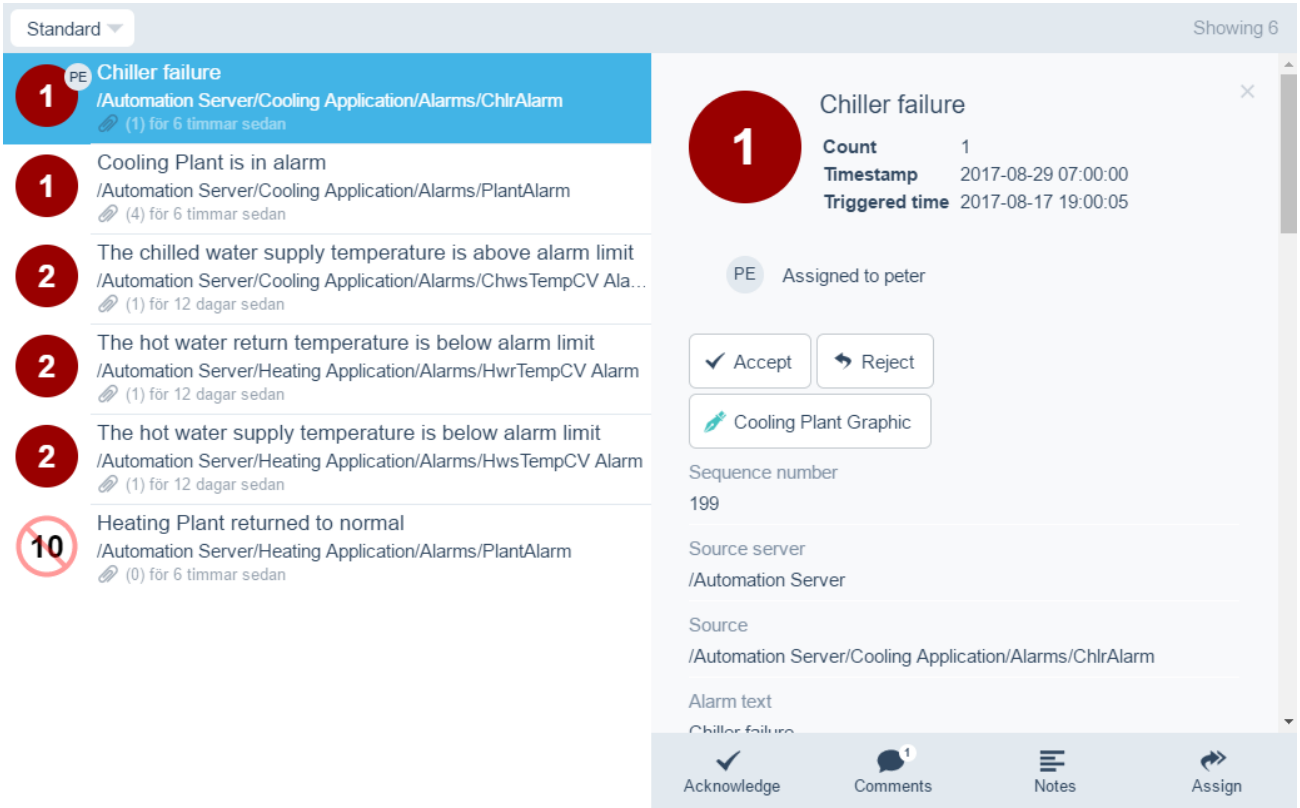


Figure – The Details dialog box in WebStation

8.3 Alarm Acknowledgements

When you acknowledge an alarm, you let other users know that you have seen the alarm. Acknowledging an alarm does not necessarily mean that you are responsible for solving the cause of the alarm.

When you acknowledge an alarm the color of the alarm in the Alarms pane changes. In WebStation the alarm symbol also changes.

An acknowledged alarm does not disappear from the Alarms pane list.

You can acknowledge one alarm or many alarms at the same time.

8.4 Acknowledging an Alarm

You acknowledge an alarm to let other users know that you have seen the alarm.

For more information, see section 8.3 “Alarm Acknowledgements ” on page 63.

To acknowledge an alarm

1. In WorkStation, in the **Alarms** pane, right-click the alarm and then click **Acknowledge**.

8.5 Alarm Assignments

A triggered alarm can be manually or automatically assigned to a specific user or user group that seems to be most suited to correct the problem.

An assigned alarm indicates for other users that someone is working with the problem that caused the alarm. The name of the user that is assigned to the alarm together with the assignment status is displayed in the Alarms pane in WorkStation or WebStation, and in the Events pane in WorkStation.

If an alarm is assigned to you, you can either accept the assignment request or reject it. Rejecting the assignment request means setting the assignment alarm back to unassigned. If you accept the assignment but realize that you are not the right person to correct the problem, you can release the assignment or assign the alarm to another user. If nobody has assigned an alarm, you can do a self-assign. When self-assigning, the status of the assignment is changed from unassigned to accepted with your name.

You can assign an alarm to a user independent of the current assignment state.

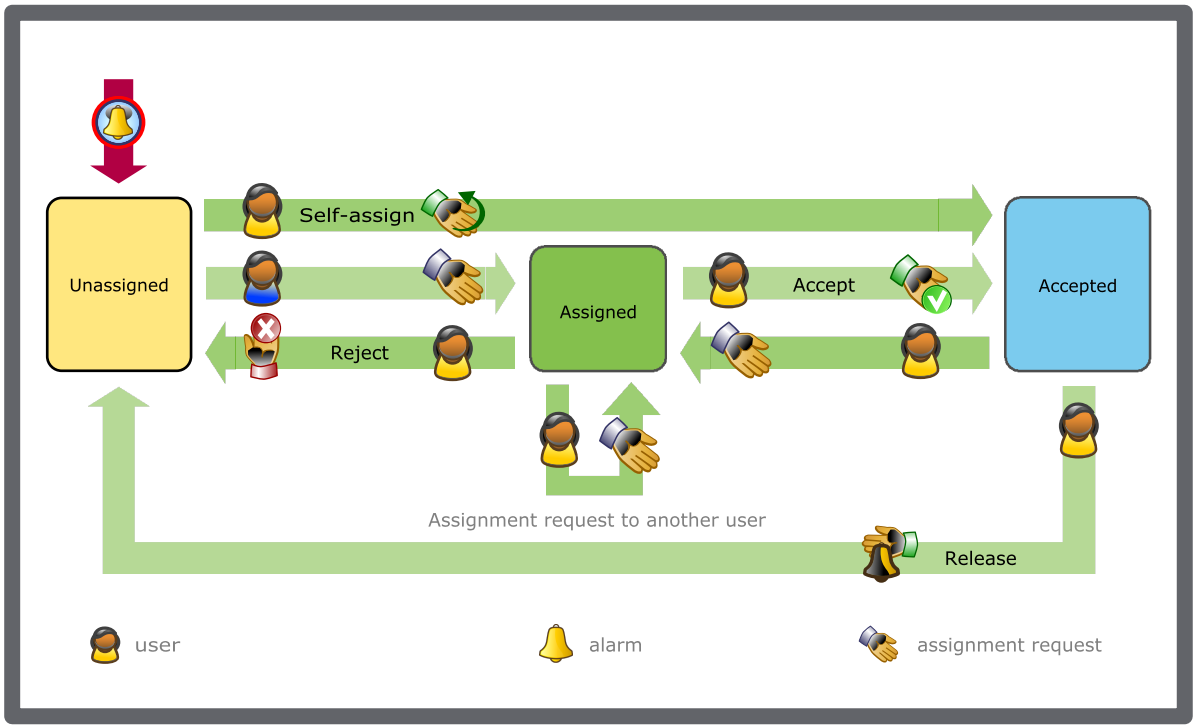


Figure – Assignment schedule triggered by an alarm

Table – Assign Statuses

Status	Description
Unassigned	Nobody is assigned to the alarm.
Assigned	An assignment request is sent to a user or user group.
Accepted	The assigned user or user-group has accepted the assignment request.

8.5.1 Manual Assignments

You or your supervisor can manually send an assignment request to the user or user group that seems most suitable to correct the problem that triggered the alarm. When manually sending an assignment request, you can define the time the user has to respond to the request. If the user does not respond to the assignment within the time limit, the request is automatically rejected and the assign status changes back to unassigned.

8.5.2 Automatic Assignments

A triggered alarm can be automatically assigned to a specific user or user group that is most suited to correct the problem. An assigned alarm indicates to other users that someone is working with the problem that caused the alarm. The name of the user that is assigned to the alarm and the assignment status are displayed in the Alarms pane, Events pane, Alarm Views and Event Views.

For more information, see the *Automatic Assignments* topic on WebHelp.

8.6 Assigning an Alarm

You assign an alarm to another user and define the time the user has to respond before the alarm is automatically rejected.

For more information, see section 8.3 “Alarm Acknowledgements ” on page 63.

To assign an alarm

1. In WorkStation, in the **Alarms pane**, right-click the alarm and then click **Assign**.
2. In the **Assign** dialog box, browse to the user or group you want to assign the alarm to.
3. Select **Amount of time until automatically rejected** and then type the amount of time you want the alarm to be rejected after.
4. Click **OK**.

8.7 Self-Assigning an Alarm

You self-assign an alarm if you feel that you are the person most suited to correct the cause of the alarm.

For more information, see section 8.5 “Alarm Assignments” on page 63.

To self-assign an alarm

1. In WorkStation, in the **Alarms** pane, right-click the alarm and then click **Self-assign**.

8.8 Accepting an Alarm Assignment

You accept an alarm that is assigned to you if you feel that you are the person most suited to take care of the alarm.

For more information, see section 8.5 “Alarm Assignments” on page 63.

To accept an alarm assignment

1. In WorkStation, in the **Alarms** pane, right-click the alarm and then click **Accept**.

8.9 Releasing an Alarm Assignment

You release an alarm that you have assigned to yourself so someone else can assign or self-assign it.

For more information, see section 8.5 “Alarm Assignments” on page 63.

To release an alarm assignment

1. In WorkStation, in the **Alarms** pane, right-click the alarm and then click **Release**.

8.10 Rejecting an Alarm Assignment

You reject an alarm if you feel that you are not the person most suited to correct the cause of the alarm.

For more information, see section 8.5 “Alarm Assignments” on page 63.

To reject an alarm assignment

1. In WorkStation, in the **Alarms** pane, right-click the alarm and then click **Reject**.

8.11 Alarm Attachments

You can add attachments to alarm objects, except System Information alarms. An attachment is a link pointing to an object in the system. When an alarm that has an attachment is triggered, a paperclip icon is displayed in the Alarms pane and Alarm Views. It is also possible to configure the attachment to display when the alarm is going from Normal to Alarm state.

An attachment can be: a voice message, a report, a trend chart, a schedule, a Microsoft Word file, a PDF file, a video recording, or a pop-up window that contains information regarding the alarm.

You can add the same attachment or set of attachments to multiple alarms in a single operation. You can also delete the attachments that belong to multiple alarms in a single operation. If you add an attachment that already has been attached to an alarm, the later attachment is added as a duplicate.

You can open attachments provided that the program or editor associated with the attachment is locally installed on your computer. For example, if the attachment is a PDF file, you can open the file if Adobe Reader or a similar program is installed on your computer.

8.12 Opening an Alarm Attachment

You open an alarm attachment to get more detailed information about what triggered the alarm.

For more information, see section 8.11 “Alarm Attachments” on page 66.

To open an alarm attachment

1. In WorkStation, in the **Alarms** pane, right-click the alarm, point to **Attachment**, and then click the attachment you want to open.

8.13 Temporary User Filters

You change the filter conditions to narrow what is displayed in the Alarms pane, Events pane, Alarm View, or Event View.

When you do not need to reuse the changes made to the filter conditions, you temporarily change the user filter. In this case, the changes are no longer available when you close the pane or View or log off.

If you want to save the changes made to the filter conditions, you can save the user filter as a favorite before closing the pane or View and before logging off. For more information, see section 8.15 “Favorites” on page 68.

Sorting and using fields in WebStation

You can add or remove information fields in the Alarm View and Event View in WebStation. The fields in WebStation display alarm and event information. For example, if you want to see the last comment of the alarms and who acknowledged the alarms you can add the field Last comments and Acknowledge by.

You can sort alarms and events in the Alarm View and Event View in WebStation. The sorting can be done ascending or descending. You don’t have to add the field that you sort on. For example, you can sort the alarms by priority without adding the priority field.

The sorting and adding of fields can be saved as a Favorite in WebStation. For more information, see section 8.15 “Favorites” on page 68.

8.14 Editing a User Filter

You edit the user filter to temporarily display a different set of alarms in the Alarms pane or an Alarm View for the logged on session.

For more information, see section 8.1 “How Alarms Work” on page 60.

To edit a user filter

1. In the **Alarms** pane or **Alarm View** toolbar, click the **Edit user filter** icon .
2. In the **Select Conditions** dialog box, click the **Add** button to add filter conditions.
3. In the **Add/Remove Conditions** dialog box, select the filter conditions you want to add to the user filter.
4. Click **OK**.

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5. In the **Select Conditions** dialog box, select the conditions for the added filters.
6. Click **OK**.

The alarms that meet the filter conditions are displayed in the Alarms pane or Alarm View until you log out of WorkStation.

8.15 Favorites

When you make layout or filter changes to certain panes and views, you can save the changes as a favorite. The purpose of the favorite is to quickly and temporarily change the Standard layout and narrow what is displayed in the pane or view by applying the favorite filter conditions.

Layout and filters in WorkStation

Layout and filter changes can be saved as favorites for the following views and panes in WorkStation:

- Alarms pane
- Alarm Views
- Events pane
- Event Views
- List Views
- Search

Layout changes can be saved as favorites for folder or container objects displayed in the List View.

Filters in WebStation

Filter changes can be saved as favorites for the following views and panes in WebStation:

- Alarms pane
- Alarm Views
- Events pane
- Event Views

If you create a favorite in WorkStation that contains both layout and filter edits, only the filter edits are available in WebStation. Filters for List view and Search are not supported by WebStation and cannot be used in WebStation.

> **IMPORTANT:** You have to be logged on to the domain controller of the domain where you want to make the filter or layout changes to be able to access the Favorites feature.

A favorite is saved for the logged on user account and is available from any computer in the EcoStruxure BMS.

When you apply a favorite, the layout and content of the pane or View changes according to the favorite layout and filter conditions. A favorite cannot display information the logged on user account does not have permissions to see. When you apply a favorite, you do not alter the pane or View for anyone else who is currently logged on using the same user account.

You can rename an existing favorite or edit the layout and filter conditions of an applied favorite and save it under the existing name or a new name. You can also delete a favorite. When you delete a favorite, you do not alter the pane or View for anyone else who is currently logged on using the same user account.

Favorites in Alarm Views and Event Views support relative paths for the Source property. You can reuse Alarm Views and Event Views containing favorites and have the Source paths in the favorites dynamically change when you paste a copy, make a duplicate, import, or move the Alarm View or Event View. For example, in a relative path: '../../*' where '../' represents a folder or other container object and '*' represents anything below the folder or container object.

You can return to the Standard layout and filter at any time. When you log off and log back on, the pane or View returns to the Standard layout and filter.

8.16 Adding a Favorites

You add a favorite to save a layout and filter change that you have made to an Alarms pane, Events pane, Alarm View, Event View, List View, or Search.

> **IMPORTANT:** You have to be logged on to the domain controller of the domain where you want to make the filter or layout changes to be able to access the Favorites feature.

For more information, see section 8.15 “Favorites” on page 68.

To add a favorites

1. On the pane or View toolbar, click the **Favorites** button  .
2. Click **Add to favorites**.
3. In the **Save Favorite** dialog box, in the **Name** box, type a name for the favorite.
4. Click **OK**.

The current layout and user filter are saved as a favorite and are displayed on the Favorites menu.

8.17 Applying a Favorite

You apply a favorite to the Alarms pane, Events pane, Alarm View, Event View, List View, or Search to temporarily change the layout and narrow the content determined by the Standard filter conditions.

IMPORTANT: You have to be logged on to the domain controller of the domain where you want to make the filter or layout changes to be able to access the Favorites feature.

For more information, see section 8.15 “Favorites” on page 68.

To apply a favorite

1. On the pane or View toolbar, click the **Favorites** button .
2. Click the name of the favorite whose layout and filter conditions you want to apply to the pane or View.

The layout and filter conditions of the applied favorite are displayed in the pane or view.

8.18 Renaming a Favorite

You rename a favorite to make it easier to find the predefined a layout and filter conditions for the Alarms pane, Events pane, Alarm View, Event View, List View, or Search.

For more information, see section 8.15 “Favorites” on page 68.

To rename a favorite

1. On the pane or View toolbar, click the **Favorites** button .
2. Click **Manage favorites**.
3. In the **Manage Favorites** dialog box, right-click the favorite whose name you want to edit.
4. Click **Rename**.
5. In the **Edit Favorite** dialog box, in the **Name** box, type a new name for the favorite.
6. Click **OK**.
7. Click **OK** again.

The favorite appears under its new name on the Favorites menu.

8.19 Deleting a Favorite

You delete a favorite that it is no longer needed.

For more information, see section 8.15 “Favorites” on page 68.

To delete a favorite

1. On the pane or View toolbar, click the **Favorites** button .
2. Click **Manage favorites**.

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3. In the **Manage Favorites** dialog box, select the favorite that you want to delete.
4. Click the **Delete** button  .
5. Click **OK**.

The favorite is removed from the Favorites menu but does not alter the current pane or view layout and filter conditions for a user who has applied the favorite.

8.20 Fitting the Column Width to the Contents

You fit the column width to the content to see all, or as much as possible, of the content displayed in each of the columns in the Alarms pane, Alarm View, Events pane, Event View, Multi Trend Log List, List View, or Search.

For more information, see the *Alarm View and Event View Standard Filter and Layout* topic on WebHelp.

To fit the column width to the contents

1. In the pane or View, right-click anywhere in the column heading row and then click **Auto fit to contents**.

The width of all the columns in the pane or View is adjusted so that all or as much as possible of the column content is displayed.

8.21 Viewing the Events of an Alarm

You view the events of an alarm when you want to check the historical data of the alarm.

To view the events of an alarm

1. In WorkStation, in the **Alarms** pane, right-click anywhere.
2. Point to **View**.
3. Click **View history**.

9 Alarm User Actions

What's in This Chapter?

9.1 User Actions

User actions are used to ease the understanding of what triggered the alarms and what to do to solve the cause of the alarm. User action can be mandatory or optional depending on how the system is set up.

9.1.1 Alarm Comments

You can add a comment to an alarm that can be helpful the next time the same alarm is triggered.

For more information, see section 9.2 “Alarm Comments” on page 73.

9.1.2 Cause Notes

A cause note is a predefined note that contains information on what triggered the alarm. This information can be helpful the next time the same alarm is triggered.

For more information, see section 9.5 “Cause Notes” on page 73.

9.1.3 Action Notes

An action note is a predefined note that contains information on what you have done to solve the problem that triggered the alarm.

For more information, see section 9.8 “Action Notes” on page 74.

9.1.4 Checklists

Checklists are predefined lists with steps you take to correct the cause of the alarm.

For more information, see section 9.11 “Checklists” on page 75.

9.2 Alarm Comments

You can add a comment to an alarm that can be helpful the next time the same alarm is triggered.

Other people can read your comment in WorkStation or WebStation. You can add a comment to an alarm that is assigned to yourself or to someone else.

Your comment is marked with your user name and the time you made the comment.

In some cases, adding a comment to an alarm is optional. In other cases, you are required to add a comment when you acknowledge the alarm.

You add a comment using WorkStation or WebStation. You can view a comment added to an alarm in WorkStation and WebStation.

9.3 Adding a Comment to an Alarm

You add a comment to an alarm to help others understand the problem that caused the alarm or how the alarm was solved.

For more information, see section 9.2 “Alarm Comments” on page 73.

To add a comment to an alarm

1. In WorkStation, in the **Alarms** pane, right-click the alarm and then click **Add comment**.
2. In the **Add Comment** dialog box, type the comment.
3. Click **OK**.

9.4 Viewing an Alarm Comment

You can view a comment for an alarm.

For more information, see section 9.2 “Alarm Comments” on page 73.

To view an alarm comment

1. In Workstation, in the **System Tree** pane, select the alarm.
2. On the **Actions** menu, click **View Comments**.

9.5 Cause Notes

A cause note is a predefined note that contains information on what triggered the alarm. This information can be helpful the next time the same alarm is triggered.

In some cases, adding a cause note is optional. In other cases, you are required to add a cause note when you acknowledge the alarm.

You add a cause note using WorkStation or WebStation. You can view a cause note added to an alarm in WorkStation or Webstation.

9.6 Adding a Cause Note to an Alarm

You add a cause note to an alarm to let others know what caused the alarm.

For more information, see section 9.5 “Cause Notes” on page 73.

To add a cause note to an alarm

1. In WorkStation, in the **Alarms** pane, right-click the alarm and then click **Add cause note**.
2. In the **Cause Notes** dialog box, select the cause note.
3. Click **OK**.

The cause note is added to the alarm.

9.7 Viewing a Cause Note

You view a cause note to see what caused the alarm.

For more information, see section 9.5 “Cause Notes” on page 73.

To view a cause note

1. In Workstation, in the the **System Tree** pane, select the alarm.
2. On the **Actions** menu, click **View Cause Notes**.

9.8 Action Notes

An action note is a predefined note that contains information on what you have done to solve the problem that triggered the alarm.

You can add an action note to an alarm. In some cases, adding an action note to an alarm is optional. In other cases, you are required to enter an action note when you acknowledge the alarm.

You add an action note using WorkStation or WebStation. You can view an action note added to an alarm in WorkStation or WebStation.

9.9 Adding an Action Note to an Alarm

You add an action note to an alarm to let others know what you have done to correct the problem that caused the alarm.

For more information, see section 9.8 “Action Notes” on page 74.

To add an action note to an alarm

1. In WorkStation, in the **Alarms** pane, right-click the alarm and then click **Add action note**.
2. In the **Action Notes** dialog box, select the action note.
3. Click **OK**.

The action note is added to the alarm.

9.10 Viewing an Action Note

You view an action note to see what actions solved the problem that triggered the alarm.

For more information, see section 9.8 “Action Notes” on page 74.

To view an action note

1. In WorkStation, in the **System Tree** pane, select the alarm.
2. On the **Actions** menu, click **View Action Notes**.

9.11 Checklists

Checklists are predefined lists with steps you take to correct the cause of the alarm.

In some cases, adding a check mark to a checklist in an alarm is optional. In other cases, you are forced to add a check mark when you acknowledge the alarm.

You add a check mark to a checklist using WorkStation or WebStation. You can view the check marks added to a checklist in WorkStation and WebStation.

9.12 Adding a Check Mark to a Checklist

You add a check mark to a checklist to show which steps you have completed to solve the cause of the alarm.

For more information, see section 9.11 “Checklists” on page 75.

To add a check mark to a checklist

1. In WorkStation, in the **Alarms** pane, right-click the alarm and then click **Checklist**.
2. Select the steps you have completed.
3. Click **OK**.

The steps in the checklist are added to the alarm.

9.13 Viewing a Checklist

You can view the steps in a checklist.

For more information, see section 9.11 “Checklists” on page 75.

To view a checklist

1. In WorkStation, in the **System Tree** pane, right-click the alarm object.
2. On the **Actions** menu, click **View Checklists**.

10 Hide and Disable Alarms

What's in This Chapter?

10.1 Hide and Disable

You can hide or disable alarms to decrease the number of alarms that are presented in the Alarms pane or Alarm View. This is particularly useful when you have many active alarms at the same time.

Hidden and disabled alarms can be displayed and enabled again at any time.

10.1.1 Hide and Show Alarms

In the Alarms pane or Alarm View, you can hide alarms to decrease the number of alarms and sort out alarms from the list.

For more information, see section 10.2 “Hide and Show Alarms” on page 76.

10.1.2 Disable and Enable Alarms

In the Alarms pane or Alarm View, you can disable an alarm. For example, you can disable an alarm if you need to do maintenance that you know will trigger the alarm.

For more information, see section 10.6 “Disable and Enable Alarms” on page 77.

10.1.3 Rechecking Alarms

In the Alarms pane or Alarm View, you recheck alarms to refresh the information.

For more information, see section 10.10 “Rechecking Alarms” on page 79.

10.2 Hide and Show Alarms

In the Alarms pane or Alarm View, you can hide alarms to decrease the number of alarms and sort out alarms from the list.

A hidden alarm is still active and changes its state as shown alarms. The only difference is that a hidden alarm that goes back to normal state is still visible in the Alarms pane, if hidden alarms are shown.

10.3 Hiding an Alarm

You hide an alarm in the Alarms pane or Alarm View to decrease the number of alarms shown in the Alarms list. All alarms, regardless of their status, can be hidden.

For more information, see section 10.2 “Hide and Show Alarms” on page 76.

To hide an alarm

1. In WorkStation, in the **Alarms** pane or Alarm View, right-click the alarm and then click **Hide alarm**.

The alarm is now hidden in the Alarms pane or Alarm View.

10.4 Showing a Hidden Alarm

You show a hidden alarm when you want to view or edit an alarm set to Hidden.

For more information, see section 10.2 “Hide and Show Alarms” on page 76.

To show a hidden alarm

1. In WorkStation, in the **Alarms** pane or Alarm View, on the **Alarm** toolbar, click the **Show hidden alarms** button  .

All hidden alarms are displayed in the Alarms pane or Alarm View.

10.5 Show Hidden Alarms

You show hidden alarms when you want them to be displayed in the Alarms pane or Alarm View.

For more information, see section 10.2 “Hide and Show Alarms” on page 76.

To show a hidden alarm

1. In WorkStation, in the **Alarms** pane or Alarm View, on the **Alarm** toolbar, click the **Show hidden alarms** button  .
2. In the **Alarms** pane, right-click the alarm and then click **Show alarm**.

The alarm is displayed in the Alarms pane or Alarm View when it is in an alarm state.

10.6 Disable and Enable Alarms

In the Alarms pane or Alarm View, you can disable an alarm. For example, you can disable an alarm if you need to do maintenance that you know will trigger the alarm.

Disabled alarms automatically disappear from the Alarms pane or Alarm View.

You can view disabled alarms to get information about the cause for disabling the alarm and the name of the user account that disabled the alarm.

NOTE:

- To disable an alarm that is in normal state, it is recommended that you use a connected shunt variable.

You enable disabled alarms so they once again change state according to the variables the alarms monitor.

If you enable an alarm that has been disabled by a user (Disable cause = User), the alarm goes to Normal state for re-evaluation. If you enable an alarm that has been disabled by the System or a shunt variable, the alarm stays disabled.

10.7 Disabling an Alarm

You disable an alarm so it does not change state according to the variables the alarm monitors.

For more information, see section 10.6 “Disable and Enable Alarms” on page 77.

To disable an alarm

1. In WorkStation, in the **Alarms** pane or Alarm View, right-click the alarm and then click **Disable alarm**.

The alarm is disabled.

10.8 Enabling an Alarm

You enable alarms so they change state according to the variables the alarm monitors.

For more information, see section 10.6 “Disable and Enable Alarms” on page 77.

To enable an alarm

1. In WorkStation, in the **Alarms** pane or Alarm View, click the **Show disabled alarms** button  .
2. In the **Alarms** pane or Alarm View, right-click the alarm and then click **Enable alarm**.

If you enable an alarm that has been disabled by a user (Disable cause = User), the alarm goes to Normal state for re-evaluation. If you enable an alarm that has been disabled by the System or a shunt variable, the alarm stays disabled.

10.9 Showing Disabled Alarms

You show disabled alarms when you want to view a list of disabled alarms, the cause for disabling an alarm, the name of the user account that disabled the alarm, or edit an alarm set to Disabled.

For more information, see section 10.6 “Disable and Enable Alarms” on page 77.

To show disabled alarms

1. In WorkStation, on the **Alarms** pane toolbar, click the **Show disabled alarms** button  .

The disabled alarms are displayed in a list with two additional columns: **Disabled cause** and **Disabled by**.

10.10 Rechecking Alarms

You recheck alarms to refresh the information in the Alarms pane.

For more information, see section 8.1 “How Alarms Work” on page 60.

To recheck alarms

1. In WorkStation, in the **Alarms** pane, right-click the alarm and then click **Recheck**.

   NOTE: Alarms that are disabled have to be re-enabled before you click **Recheck**.

11 Alarms State-Change Logging

What's in This Chapter?

11.1 Alarm State-Change Logging

Every time an alarm changes its state, such as from alarm state to reset state, an event is written in the event log and shown in the Events pane in WorkStation. You can disable state-change logging if you are only interested in the current alarm status. For example, you want to present the current alarm status in a graphic and do not care about the event history.

11.1.1 Count

In the Alarm view, the value in the Count column counts +1 each time an alarm changes to alarm state. When the alarm state changes to normal, the count is reset to zero.

For more information, see section 11.4 “Count” on page 80.

11.2 Enabling State-Change Logging of an Alarm

You enable the state-change logging of an alarm.

For more information, see section 11.1 “Alarm State-Change Logging ” on page 80.

To enable state-change logging of an alarm

1. In the **Alarms** pane or Alarm View, right-click the alarm you want to log and then click **Enable state-change logging**.

11.3 Disabling State-Change Logging of an Alarm

You disable the state-change logging of an alarm to prevent the Events pane from filling up with events caused by a faulty alarm that frequently toggles between alarm states.

For more information, see section 11.1 “Alarm State-Change Logging ” on page 80.

To disable state-change logging of an alarm

1. In the **Alarms** pane or Alarm View, select the alarm you want to disable the logging for and click **Disable state-change logging**.

11.4 Count

In the Alarm view, the value in the Count column counts +1 each time an alarm changes to alarm state. When the alarm state changes to normal, the count is reset to zero.

This information is useful if an alarm at a certain value tends to frequently toggle between alarm and reset, which unnecessarily disturbs the assigned user. The count could then be a proof to adding a deadband to the alarm that dismiss this uncertain value.

12 Events

What's in This Chapter?

12.1 How Events Work

All system events, as well as information and circumstances, are recorded in the Event log. These event records can be viewed in the Events pane or in an Event View.

Events can tell you when someone logged on or off the EcoStruxure BMS, when a setpoint was changed, if a notification was written to a file, if an email notification was sent or not and when an object was created. For example, Events can tell you when a trend log or an alarm was created, and by whom. The event log also records when automation servers were online or offline and when the software was upgraded. The event log is useful for tracking down all information in your system.

To limit the events displayed in the WorkStation Events pane, you can use the time interval filter or a number of other filters. An indicator tells you the number of displayed events.

You can create and use more than one Event View. Each Event View and the Events pane can be customized with an event filter to only show the information you are interested in.

You can view all events that have been generated from one object in the system.

In WorkStation, you can also view all events for a branch. A branch can be, for example, a folder or a network including all contents.

When you view Events in this branch, the events are based on the path of the branch. This means that there is no complete list of historical events for objects that have been moved into the branch. Historical events are also lost if the container has been moved or renamed. Events for objects that has been removed or deleted from the container are displayed.

In the Events view, you can also open a detailed view to inspect all properties for a selected event.

For scheduled events, changes are encoded:

- Monday: WS00001
- Tuesday: WS00002
- Wednesday: WS00003

- Thursday: WS00004
- Friday: WS00005
- Saturday: WS00006
- Sunday: WS00007

12.1.1 Events Pane and Event View Customization

You can style certain events to bring out those that are of more interest than other events listed in the Events pane and Event Views. To style a specific event, you first have to create a condition that is associated with the events you want to style. An event can be styled with a unique background color, font, and font color.

For more information, see the *Events Pane and Event View Customization* topic on WebHelp.

12.1.2 Event Filter Conditions

Event filter conditions are used to set up the conditions for the events you want to be displayed in the Events pane or an Event View.

For more information, see the *Event Filter Conditions* topic on WebHelp.

12.1.3 Favorites

When you make layout or filter changes to certain panes and views, you can save the changes as a favorite. The purpose of the favorite is to quickly and temporarily change the Standard layout and narrow what is displayed in the pane or view by applying the favorite filter conditions.

For more information, see section 8.15 “Favorites” on page 68.

12.1.4 Archive Overview

Archiving is the process of preserving historical data, which is comprised of selected events and extended trend logs. For example, some facilities are required to maintain archives to comply with government regulations. Another example is in secure facilities where they must maintain records of who logged in or who changed setpoints. Archiving is not a backup function because archive data cannot be imported back into the system.

For more information, see the *Archiving Overview* topic on WebHelp.

12.2 Opening the Alarms and Events Detail View

You open the Alarms and Events detail view to view the details of an alarm or an event.

To open the alarms and events detail view

1. In the Alarms view or Events view, right-click the alarm or event you want to view the details for.
2. Click **Detail View**.

12.3 Opening an Object-specific Event View

You can view all the events that are related to a specific object or a specific branch.

NOTE: The object-specific standard filter can only narrow what is being shown in the Event View.

For more information, see the *Events Pane and Event View Customization* topic on WebHelp.

To open an object-specific event view

1. In the **System Tree** pane, select the object that you want to view the events for.
2. On the **Actions** menu, point to **View** and then click **Events** or **Events in this branch**.

12.4 Editing a User Filter

You edit the user filter to temporarily display a different set of events in the Events pane or an Event View for the logged on session.

For more information, see section 12.1 “How Events Work ” on page 82.

To edit a user filter

1. In the **Events** pane or Event View toolbar, click the **Edit user filter** icon .
2. In the **Select Conditions** dialog box, click the **Add** button to add filter conditions.
3. In the **Add/Remove Conditions** dialog box, select the filter conditions you want to add to the user filter.
4. Click **OK**.
5. In the **Select Conditions** dialog box, select the conditions for the added filters.
6. Click **OK**.

The events that meet the filter conditions are displayed in the Events pane or Event View until you log out of WorkStation.

12.5 Applying an Event Time Filter

You use the event time filter to limit the number of events displayed in the Events pane or to narrow a search based on a particular time interval.

IMPORTANT:

- The time filter is a temporary filter for the logged on user. To save a time filter, you have to add it as a Favorite. For more information, see section 8.15 “Favorites” on page 68.

- If you have auto hidden the Events pane or Event View, you have to temporarily pin the pane or View before applying the event time filter. For more information, see section 21.14 “Pane Menu” on page 209.

For more information, see section 12.1 “How Events Work ” on page 82.

To apply an event time filter

1. In WorkStation, open the **Events** pane.
2. Click the period selection button  .
3. Select the period you want to filter on:
   - To display the events for the past 24 hours, click the Day button  .
   - To display the events for the past week, click the Week button  .
   - To display the events for the past month, click the Month button  .
   - To display the events for the past year, click the Year button  .
4. To modify the selected start time or date, select the **Start** box, enter a start time, and click a different start date in the calendar.
5. To modify the selected end time or date, select the **End** box, enter an end time, and click a different end date in the calendar.
6. Click **Apply**.

The **Events** pane displays the events generated within the selected date and time interval.

13 Trend Charts

What's in This Chapter?

13.1 How Trend Charts Work

Trend charts are a way to graphically present trend logs. A trend chart can contain one or more trend logs that are represented in the trend chart by lines or bars.

You can also add and remove trend logs from a trend chart. This makes it easy to compare different trend logs, for example the energy consumption compared to the average temperature.

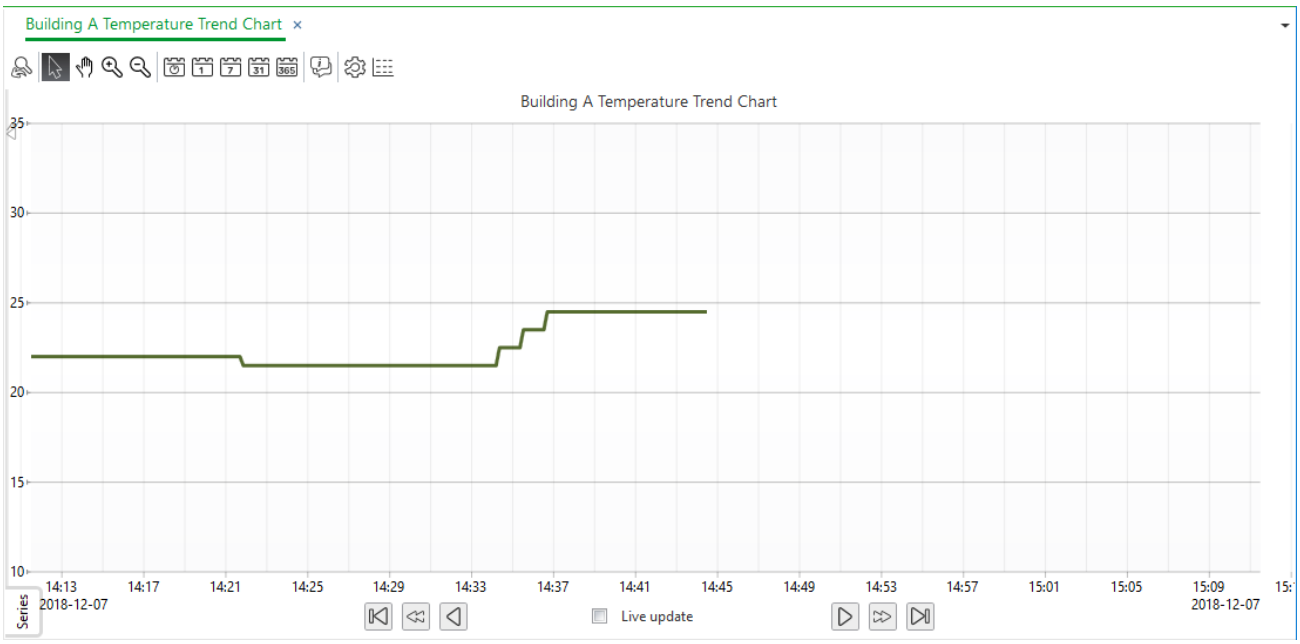

Figure – Trend chart in WorkStation

13.1.1 Trend Chart Navigation in WorkStation

The trend chart contains a lot of tools for easy navigation in the chart. You can scroll or use the predefined settings to focus on the time span you want to see.

For more information, see section 13.5 “Trend Chart Navigation in WorkStation” on page 89.

13.1.2 Trend Chart Navigation in WebStation

The trend chart contains a lot of tools for easy navigation in the chart. You can scroll or use the predefined settings to focus on the time span you want to see.

For more information, see the *Trend Chart Navigation in WebStation* topic on WebHelp.

13.1.3 Trend Chart Series in WorkStation

You can display the trend logs as trend log series in a trend chart in a number of ways. For example, you can change the color and weight of the trend log line, or display markers at the time where the trend log value was sampled.

For more information, see section 13.12 “Trend Chart Series in WorkStation” on page 90.

13.1.4 Trend Chart Series in WebStation

You can display the trend logs as trend log series in a trend chart in a number of ways. For example, you can change the color and weight of the trend log line, or display markers at the time where the trend log value was sampled.

For more information, see the *Trend Chart Series in WebStation* topic on WebHelp.

13.1.5 Trend Chart Axes in WebStation

A trend chart displays the records of a trend log or an extended trend log as a series.

For more information, see section 13.25 “ Trend Charts” on page 95.

13.2 Opening a Trend Chart

You open a trend chart to see a graphical presentation of a trend log.

For more information, see section 13.1 “How Trend Charts Work” on page 87.

To open a trend chart

1. In WorkStation or WebStation, in the **System tree** pane, click the trend chart you want to open.

The trend chart is now opened.

13.3 Creating a Trend Chart

You create a trend chart to get a graphic presentation of a trend log.

For more information, see section 13.1 “How Trend Charts Work” on page 87.

To create a trend chart

1. In WorkStation, in the **System Tree** pane, select the trend log or the variable you want to create the trend chart from.
2. In the **Actions** menu, point to **View**, point to **Trend charts**, and then click **New Trend chart**.
3. Click the **Save** button  .
4. Browse to where you want to save the trend chart.

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5. Click **Save**.

13.4 Printing a Trend Chart

You print a trend chart to get a snapshot of what is displayed in the trend chart.

For more information, see section 13.1 “How Trend Charts Work” on page 87.

To print a trend chart

1. In WorkStation, in the **System Tree** pane, open the trend chart you want to print.
2. On the main toolbar, click the **Print** button  .
3. In the **Print out** dialog box, select a printer and then click **Print**.

The part of the trend chart that is displayed on the screen is printed.

13.5 Trend Chart Navigation in WorkStation

The trend chart contains a lot of tools for easy navigation in the chart. You can scroll or use the predefined settings to focus on the time span you want to see.

13.6 Zooming In a Trend Chart

You zoom in to enlarge the scale of the trend chart to make the reading easier.

For more information, see section 13.1 “How Trend Charts Work” on page 87.

To zoom in a trend chart

1. In WorkStation, in the **System Tree** pane, select the trend chart.
2. On the **Trend Chart** toolbar, click the **Zoom in** button  .

13.7 Zooming In an Area of a Trend Chart

You zoom in to enlarge a specific area of the trend chart to make the reading easier.

For more information, see section 13.1 “How Trend Charts Work” on page 87.

To zoom in an area of a trend chart

1. In WorkStation, in the **System Tree** pane, select the trend chart you want to show.
2. On the **Trend Chart** toolbar, click the **Zoom in** button  .
3. In the trend chart, select the area you want to enlarge.
4. Click the **Zoom out** button  to zoom out to 100%.

13.8 Zooming Out of a Trend Chart

You zoom out to decrease the scale of the trend chart to make the reading easier.

For more information, see section 13.1 “How Trend Charts Work” on page 87.

To zoom out of a trend chart

1. In WorkStation, in the **System Tree** pane, select the trend chart.
2. On the **Trend Chart** toolbar, click the **Zoom out** button  .

13.9 Scrolling a Trend Chart Vertically

You scroll the trend chart up and down to make reading a series easier.

For more information, see section 13.1 “How Trend Charts Work” on page 87.

To scroll a trend chart vertically

1. In WorkStation, in the **System Tree** pane, select the trend chart.
2. On the **Trend Chart** toolbar, click the **Scroll trend chart vertical** button  .
3. Drag the trend chart upwards or downwards.

13.10 Scrolling the X-Axis in Small Steps

To navigate in the trend chart in small steps, you scroll the x-axis in steps equal to one tenth of the displayed x-axis in the trend chart.

For more information, see section 13.1 “How Trend Charts Work” on page 87.

To scroll the x-axis in small steps

1. On the **Trend Chart**, click the **Backward** button  to scroll the x-axis left, and the **Forward** button  to scroll the x-axis right.

13.11 Scrolling the X-Axis in Big Steps

You scroll the x-axis of a trend chart in big steps equal to the entire displayed x-axis in the trend chart.

For more information, see section 13.1 “How Trend Charts Work” on page 87.

To scroll the x-axis in big steps

1. On the **Trend Chart**, click the **Fast backward**  button to scroll the x-axis left, and the **Fast forward** button  to scroll the x-axis right.

13.12 Trend Chart Series in WorkStation

You can display the trend logs as trend log series in a trend chart in a number of ways. For example, you can change the color and weight of the trend log line, or display markers at the time where the trend log value was sampled.

These settings can be saved so that the trend chart is displayed in the same way anytime you open it.

13.13 Displaying Specific Time Spans of a Trend Chart

You change the time spans of the trend chart to display one hour or one year.

For more information, see section 13.1 “How Trend Charts Work” on page 87.

To display specific time spans of a trend chart

1. In WorkStation, in the **System Tree** pane, select the trend chart you want to show.
2. On the **Trend Chart** toolbar, click the time span you want to display:
   - Click the **Show one hour** button  .
   - Click the **Show one day** button  .
   - Click the **Show one week** button  .
   - Click the **Show one month** button  .
   - Click the **Show one year** button  .

13.14 Viewing Events in a Trend Chart

You view trend chart events to track events or status of the trend chart.

For more information, see section 13.1 “How Trend Charts Work” on page 87.

To view events in a trend chart

1. In Workstation, select the trend chart you are working with.
2. On the trend chart toolbar, click the **Show events** button  .

Repeat this procedure to hide the events.

13.15 Refreshing a Trend Chart

You manually refresh the trend chart to see the latest records. The trend chart does not automatically update if live update is disabled or if the trend chart presents a field controller trend log.

For more information, see section 13.1 “How Trend Charts Work” on page 87.

To refresh a trend chart

1. In WorkStation, in the **System Tree** pane, select the trend chart you want to refresh.
2. On the main toolbar, click the **Refresh** button  .

The trend chart is now refreshed and up-to-date.

13.16 Updating a Trend Chart with Live Values

You use live update if you want the trend chart to automatically get updated values from the trend log in the system.

For more information, see section 13.1 “How Trend Charts Work” on page 87.

To update a trend chart with live values

1. In WorkStation, in the **System Tree** pane, click the trend chart.
2. On the Trend Chart navigation bar, select **Live update**.

The trend chart is automatically updated with values from the system.

13.17 Hiding a Series in a Trend Chart

When you want to concentrate on a specific trend log record series, you hide the other trend log record series in the chart.

For more information, see section 13.1 “How Trend Charts Work” on page 87.

To hide a series in a trend chart

1. In WorkStation, in the **System Tree** pane, select the trend chart.
2. On the **Trend Chart**, click the **Series** tab.
3. In the Series area, click on the series you want to hide.

13.18 Comparing Trend Chart Values Between Series

You use the Show the nearest information on every series when you want to compare trend chart series at a specific time.

For more information, see section 13.1 “How Trend Charts Work” on page 87.

To compare trend chart values between series

1. In WorkStation, in the **System Tree** pane, select the trend chart you want to show.
2. On the **Trend Chart** toolbar, click the **Show nearest information on every series** button  .
3. Point to any series in the trend chart.

The values for every series at this specific time are now shown. Repeat the procedure to deactivate the function.

13.19 Changing the Line Weight of a Trend Chart Series

You change the line weight of a trend chart series to make it easier to differentiate the series.

For more information, see section 13.1 “How Trend Charts Work” on page 87.

To change the line weight of a trend chart series

1. In WorkStation, in the **System Tree** pane, select the trend chart you want to configure.
2. On the **Trend Chart** toolbar, click the **Open trend chart settings** button .
3. In the Trend Chart Settings properties, click the **Series** tab.
4. In the **Data series** box, select the series you want to change the line weight on.
5. In the **Weight** box, type a weight.
6. Click **OK**.

The line weight of the series is now changed.

13.20 Changing the Display Order of a Trend Chart Series

You change the display order of the series in a trend chart, for example, if one series is obscured by another series.

For more information, see section 13.1 “How Trend Charts Work” on page 87.

To change the display order of a trend chart series

1. On the **Trend Chart**, click the **Series** tab.
2. In the **Series** area, right-click a series and select **Bring to front**.

The selected series is now placed in front of the other series.

13.21 Changing the Color of a Trend Chart Series

You change the color of a trend chart series to make reading easier.

For more information, see section 13.1 “How Trend Charts Work” on page 87.

To change the color of a trend chart series

1. In WorkStation, in the **System Tree** pane, select the trend chart you want to configure.
2. On the **Trend Chart** toolbar, click the **Open trend chart settings** button .
3. In the **Trend Charts Setting** dialog box, click the **Series** tab.
4. In the **Data series** box, select the series you want to change color on.
5. In the **Color** box, enter a color.
6. Click **OK**.
7. In the **Trend chart settings** dialog box, click **OK**.

The color of the series is now changed.

13.22 Showing Markers in a Trend Log Series

You show trend log series with markers for each record to make reading easier.

NOTE:

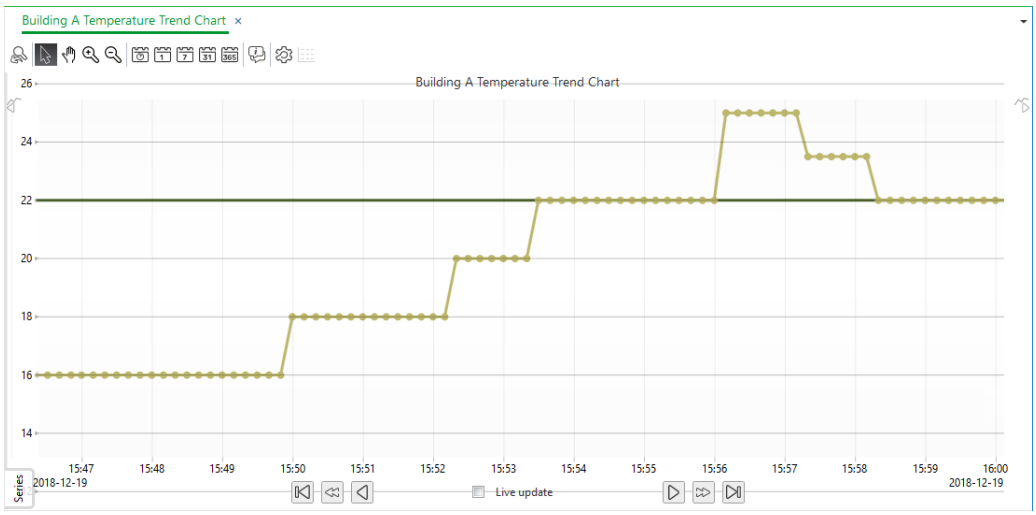
- This feature is only applicable to lines and discrete lines.

For more information, see section 13.1 “How Trend Charts Work” on page 87.

To show markers in a trend log series

1. In WorkStation, in the **System Tree** pane, select the trend chart.
2. On the **Trend Chart** toolbar, click the **Open trend chart settings** button .
3. Click the **Series** tab.
4. In the **Data series** box, select the series you want to show with markers.
5. Select **Show markers**.
6. Click **OK**.

The series is now presented with markers.



13.23 Changing the Presentation Type of a Trend Chart Series

You change the presentation type of a trend chart series to adapt the appearance to your needs.

For more information, see section 13.1 “How Trend Charts Work” on page 87.

To change the presentation type of a trend chart series

1. In WorkStation, in the **System Tree** pane, select the trend chart you want to configure.

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2. On the **Trend Chart** toolbar, click the **Open trend chart settings** button .
3. In the Trend Chart Settings dialog box, click the **Series** tab.
4. In the **Data series** box, select the series you want to display in another presentation type.
5. In the **Series presentation** box, select a presentation type.
6. Click **OK**.

The presentation type for the data series is now edited.

13.24 Saving the Trend Chart Settings

You save the trend chart settings if you want the trend chart to be displayed the same way the next time you open it.

For more information, see section 13.1 “How Trend Charts Work” on page 87.

To save the trend chart settings

1. In WorkStation, in the **System Tree** pane, open the trend chart.
2. Change the settings to fit your preferences.
3. Click the **Save** button .

13.25 Trend Charts

A trend chart displays the records of a trend log or an extended trend log as a series.

A trend chart series that presents a trend log is automatically updated with the latest records, if **Live update** in WorkStation or **Automatic scroll** in WebStation is activated. A trend chart series that presents records from a field controller trend log needs to be refreshed manually.

There is no upper limitation of how many trend logs a trend chart can present. However, the performance decreases as the number of displayed trend logs increase. The records of the trend log can be processed by a calculation method before they are presented in the trend chart. The calculation function supports negative consumption values, which can be used to handle cases where you need to subtract consumption for, for example, energy produced on site.

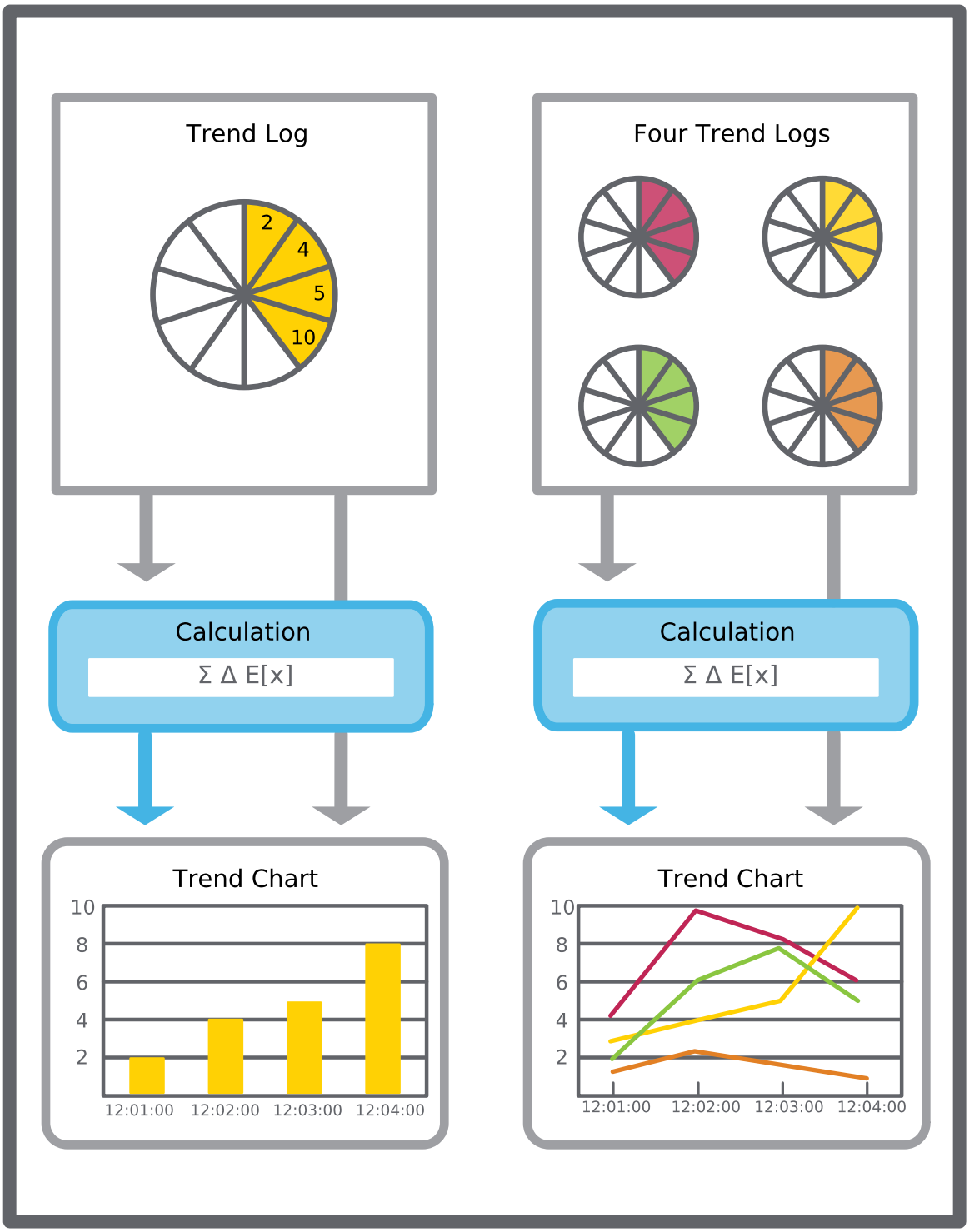

Figure – Trend chart, schematic

When a trend chart presents records live from an extended trend log, the latest records of the connected trend log are frequently transferred to the extended trend log. This decreases the delay that can occur when the extended trend log has to wait for the transfer threshold to be reached before new records from the trend log are transferred. With this method, the trend chart presents the latest records.

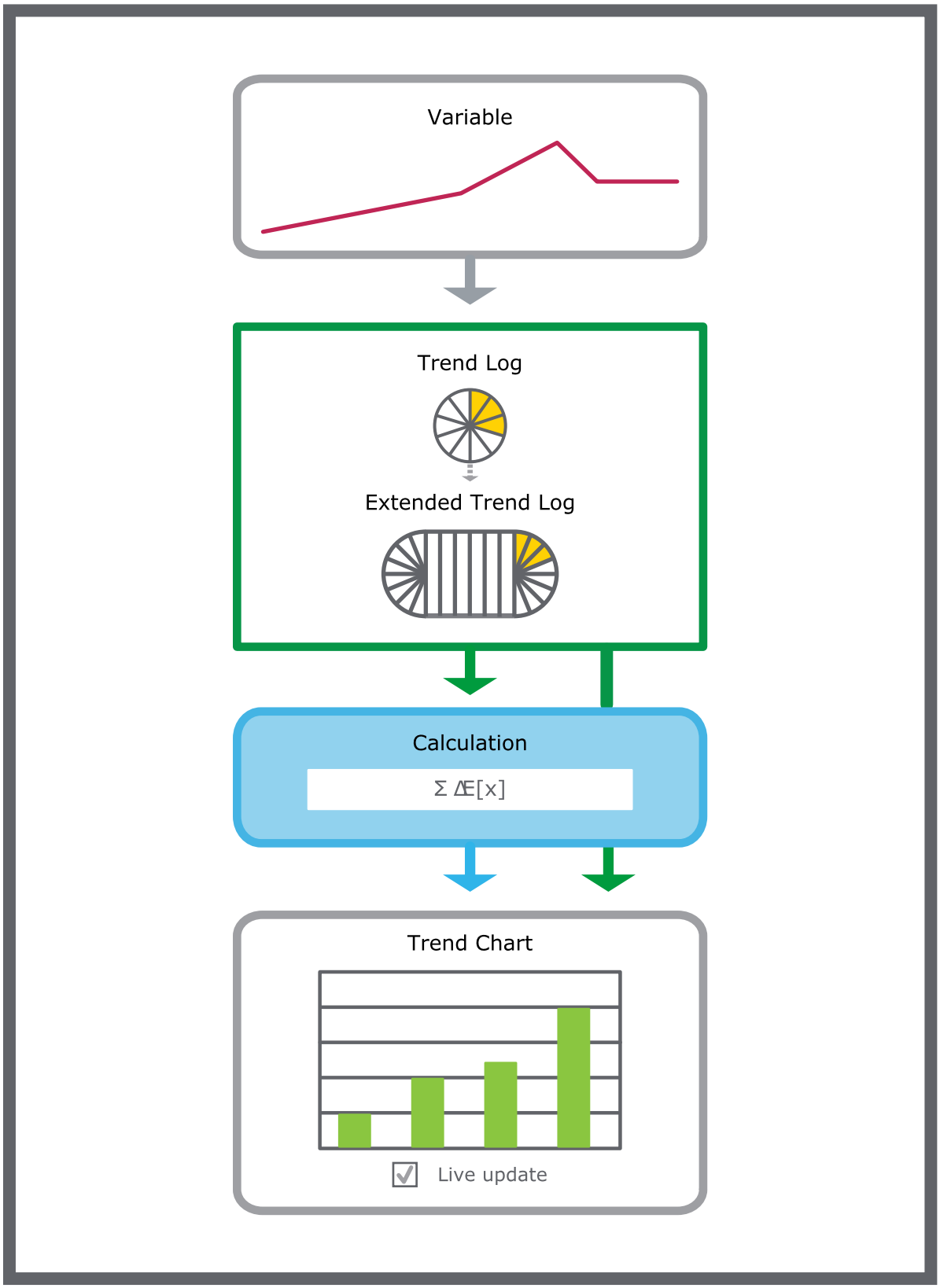

Figure – An extended trend log, that presents in an opened live trend chart, frequently transfers the latest records from the trend log to the extended trend log.

If two extended trend logs are connected between the trend log and the trend chart, the transfer that occurs when a trend chart presents records live only transfers the records from the nearest extended trend log. The transfer threshold rate between the trend log and the first connected trend log remains unaffected.

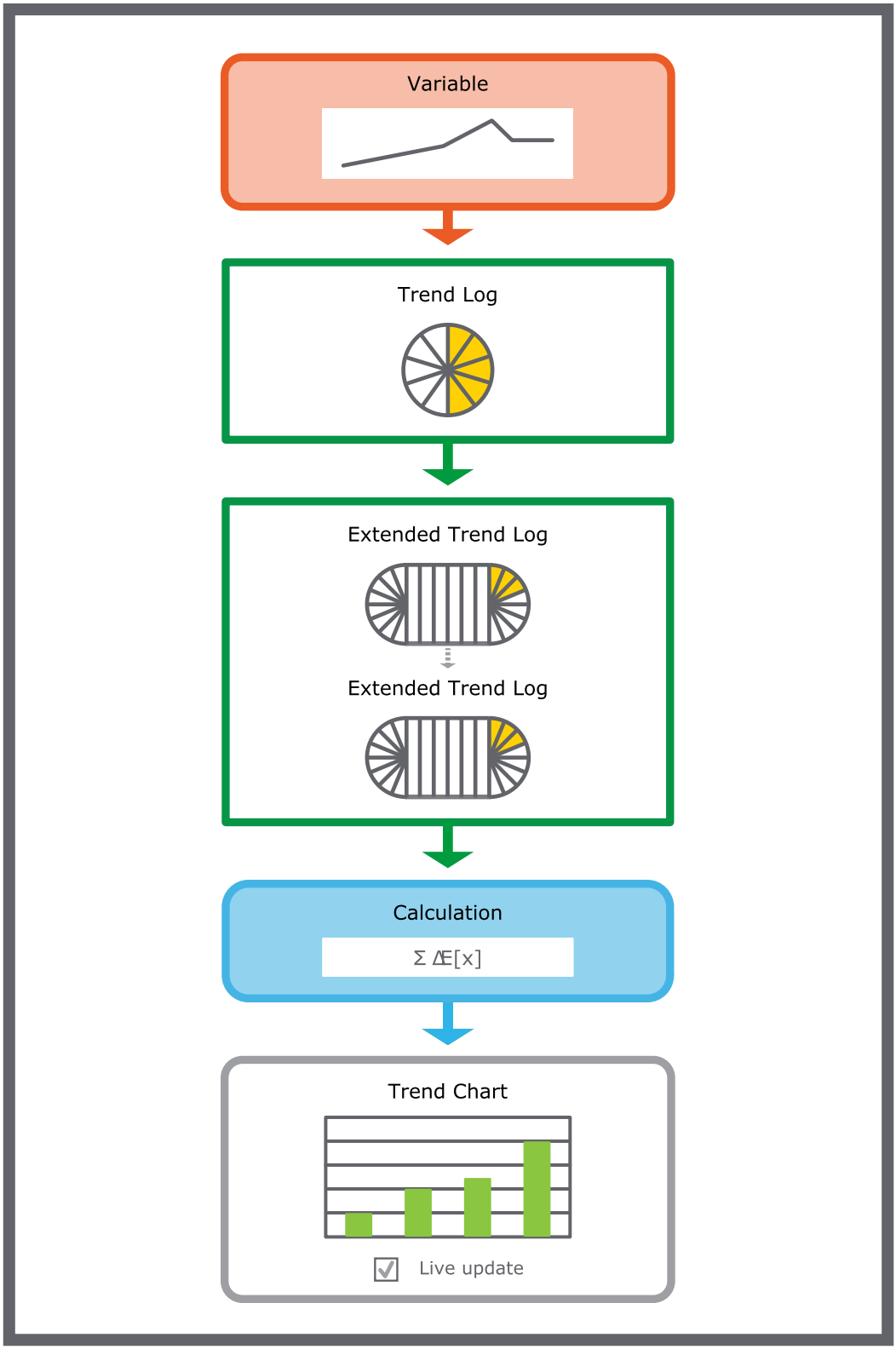

Figure – Latest trend log record that does not present the same short latency in a live trend chart when two extended trend logs are connected in a series between the trend log and trend chart.

When waiting for a new record, the trend chart draws a dotted line from the last recorded value and forward. When a new value is recorded, the dotted line between the last and the new record is replaced by a solid series of lines.

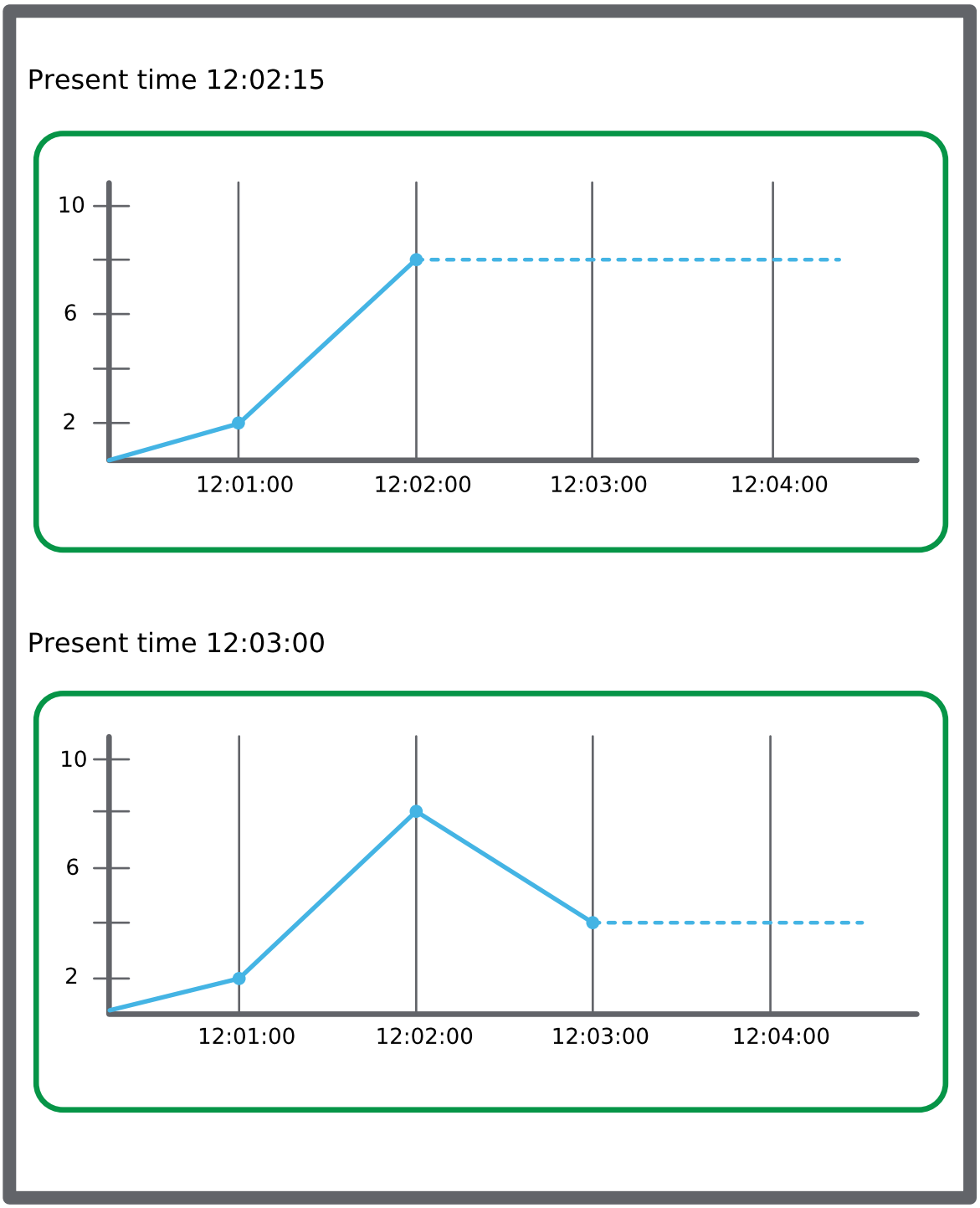

Figure – If no value is recorded, the trend chart draws a dotted line.

Dynamic Trend Chart Title

Trend charts support relative property references for the trend chart title. You can reuse the trend chart and have the trend chart title dynamically changed depending on where you paste a copy, make a duplicate, import, or move the trend chart. The Chart title property of the trend chart is the first part of the trend chart title and the Description property of the trend chart is the last part of the trend chart title. For example, in a relative property reference: '../../NAME' where '../' represents a folder or container object.

If the Chart title property is empty or contains an unresolved reference, the trend chart object name is the first part of the trend chart title.

The trend chart title is visible in trend chart printouts.

13.25.1 Trend Chart Series

In a trend chart, a series can be presented as a line, discrete line, digital, or bars. In a trend chart, series can be presented in different colors and with different line weights.

In WorkStation, in a multi trend log list, series are presented as text and can be exported to .XML or .CSV.

For more information, see the *Trend Series* topic on WebHelp.

13.25.2 Trend Chart Axes in WorkStation

The x-axis of the trend chart represents time. The time span of the axis can be set with a fixed start and end time or with an end time relative to the present time. The axis can be quick-scaled to show the last hour, last day, last month, or last year.

For more information, see section 13.30 “Trend Chart Axes” on page 105.

13.25.3 Trend Chart Axes in WebStation

The x-axis of the trend chart represents time. The time span of the axis can be set with a fixed start and end time or with an end time relative to the present time. The axis can be quick-scaled to show the last hour, last day, last month, or last year.

For more information, see the *Trend Chart Axes in WebStation* topic on WebHelp.

13.25.4 Real-Time Plotting

The real-time plot is a variable displayed directly in the trend chart. The real-time plot is an instant reflection of the variable, so the history of the real-time plot is lost when the trend chart is closed. However, the history is not lost for I/O points that have implicit logs where approximately 500 records of history are displayed.

For more information, see the *Real-Time Plotting* topic on WebHelp.

13.25.5 Time Zone Modes in a Trend Chart

In a trend chart, you can present the records of a trend log in different time zones: local time or a predefined time zone.

For more information, see the *Time Zone Modes in a Trend Chart* topic on WebHelp.

13.25.6 Calculation Methods

Use a calculation method to process the records of the trend log before presenting them in a trend log list or a trend chart. The original records in the trend log are not affected by the calculation method. The calculation method is applied to the trend log records grouped by a specific time interval.

For more information, see section 14.15 “Calculation Methods” on page 119.

13.25.7 Period Timestamps in Trend Charts and Trend Log Lists

When a calculated value for a period is presented, the middle of the period is used as the timestamp.

Example:

The calculated value for the period 8:00-9:00 is stamped 8:30. If there is a value at 9:01, the next period is 9:00-10:00, which is stamped as 9:30. The full period may not have passed yet, but the value can be presented even if parts of the period are in the future.

13.25.8 Temporary Trend Charts

To display a trend log without creating a new trend log list or trend chart, the trend log can be displayed in a temporary list or chart.

For more information, see the *Temporary Trend Charts* topic on WebHelp.

13.25.9 Multi Trend Log Lists

You can view a trend chart in a multi trend log list to be able to export it and print it. The trend chart series settings and calculation are retained in the multi trend log list.

For more information, see the *Multi Trend Log Lists* topic on WebHelp.

13.25.10 Floating Point Values NaN, INF, and –INF

In the EcoStruxure Building Operation software, the floating point values “Not a Number”, positive infinity, or negative infinity may be displayed in the **Basic** property tab, in a trend log list, or a trend chart.

For more information, see the *Floating Point Values NaN, INF, and –INF* topic on WebHelp.

13.26 Configuring a Trend Chart

You configure the properties of a trend chart to meet the unique needs of your site.

For more information, see section 13.25 “ Trend Charts” on page 95.

To configure a trend chart

1. In WorkStation, in the **System Tree** pane, select the trend chart you want to configure.

2. On the **File** menu, click **Properties**.
3. In the properties dialog box, click the **Basic** tab.
4. Edit the basic properties:

Property	Description
Time mode	Select the time mode of the x-axis.
Start time	Enter the absolute start time when Time mode is set to **Absolute**. This time is the leftmost point of the x-axis.
Time span	Type the relative time span of the x-axis.
Time zone	Select the time zone of the trend log list. The mode is the perspective in which the trend log is displayed.
Show nearest information for all series	Select **True** to show information on every series along a diagonal line.
Show grid lines for X-axis	Select **True** to show grid lines for the x-axis.
Chart title	Enter the property reference or relative property reference to the folder or other container whose name you want to include in the trend chart title.
Auto scale left y-axis	Select **True** to activate auto scale and have the left y-axis adapt itself to the displayed series.
Left y-axis minimum	Enter the minimum value of the left y-axis.
Left y-axis maximum	Enter the maximum value of the left y-axis.
Auto scale right y-axis	Select **True** to activate auto scale and have the right y-axis adapt itself to the displayed series.
Right y-axis minimum	Enter the minimum value of the right y-axis.
Right y-axis maximum	Enter the maximum value of the right y-axis.
Show grid lines for left Y-axis	Select **True** to show gridlines for the left y-axis originating from the y-axis scale.
Show grid lines for right Y-axis	Select **True** to show gridlines for the right y-axis originating from the y-axis scale.
	**Add** Click to add a series to the trend chart. For more information, see the *New Object Wizard – Naming the Object Page* topic on WebHelp.
	**Edit** Click to edit a selected series. For more information, see the *Trend Chart Series Properties* topic on WebHelp.

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Property	Description
	**Remove** Click to remove a selected series.

5. Click the **Series** tab.
6. Edit the series properties.
7. Click **OK**.

13.27 Viewing a Trend Log in a Temporary Trend Chart

You open a trend log as a temporary trend chart to view the recorded values graphically. When you close the temporary trend chart, the chart is not saved.

For more information, see the *Temporary Trend Charts* topic on WebHelp.

To view a trend log in a temporary trend chart

1. In WorkStation, in the **System Tree** pane, select the folder or EcoStruxure BMS server where the trend log is located.
2. Select the trend log you want to open as a temporary trend chart.
3. On the **Actions** menu, point to the **View** submenu and then click **In Trend Chart**.

The temporary trend chart is displayed in the work area under a generic name.

13.28 Removing a Trend Chart Series

You remove unused series from the trend chart.

For more information, see section 13.1 “How Trend Charts Work” on page 87.

To remove a trend chart series

1. In WorkStation, in the **System Tree** pane, select the trend chart from which you want to remove a series.
2. On the **Trend Chart**, click the **Series** tab.
3. In the **Series** area, right-click a series and select **Remove series**.

The selected series is now removed from the trend chart.

13.29 Creating a Real-Time Plot Trend Chart

You create a real-time plot trend chart to display a variable in real time.

For more information, see the *Real-Time Plotting* topic on WebHelp.

To create a real-time plot trend chart

1. In WorkStation, in the **System Tree** pane, select the variable you want to display in a real-time plot trend chart.
2. On the **Actions** menu, point to **View** and then click **New Trend chart.**
3. Click the **Save** button .
4. Browse to where you want to save the real-time plot trend chart.
5. Click **Save**.

By saving the real-time plot trend chart, a trend chart object is created in the System Tree pane.

13.30 Trend Chart Axes

The x-axis of the trend chart represents time. The time span of the axis can be set with a fixed start and end time or with an end time relative to the present time. The axis can be quick-scaled to show the last hour, last day, last month, or last year.

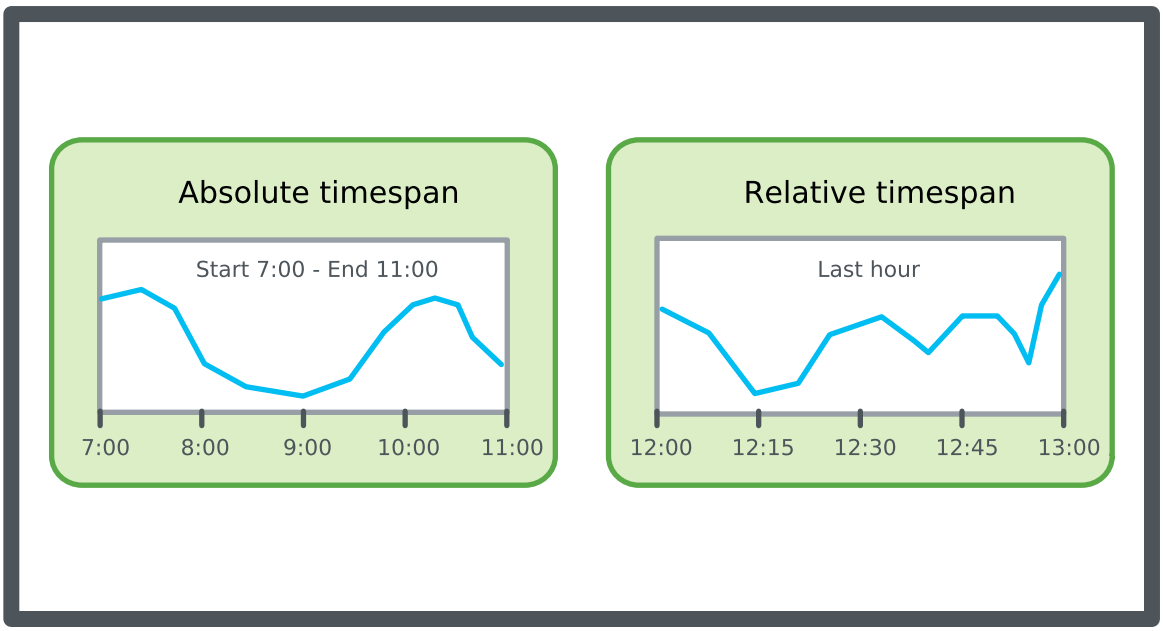


Figure – Absolute time span and relative time span, schematic

The y-axis refers to the measurement unit that the variable represents. The scale of the y-axis can be set manually or by auto scale. You can configure the trend chart to present series on one y-axis or two y-axes, one to the left and one to the right. Use two y-axes to present series with different ranges in the same trend chart.

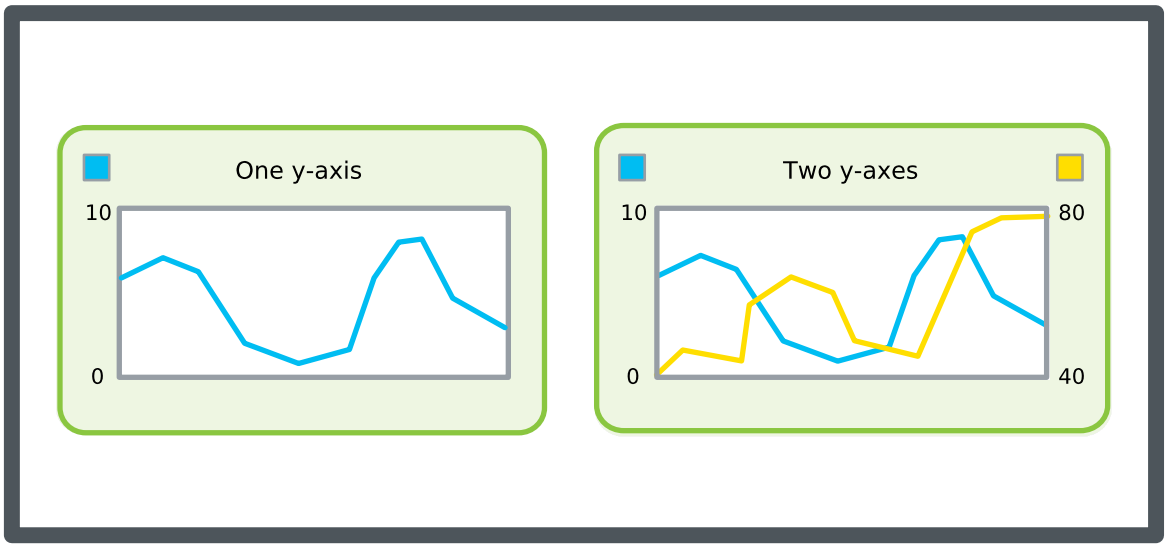


Figure – One y-axis and two y-axes, schematic

To make reading easier, grid lines can be shown in the trend chart. Grid lines can be shown in both the x- and y-direction, independent of each other.

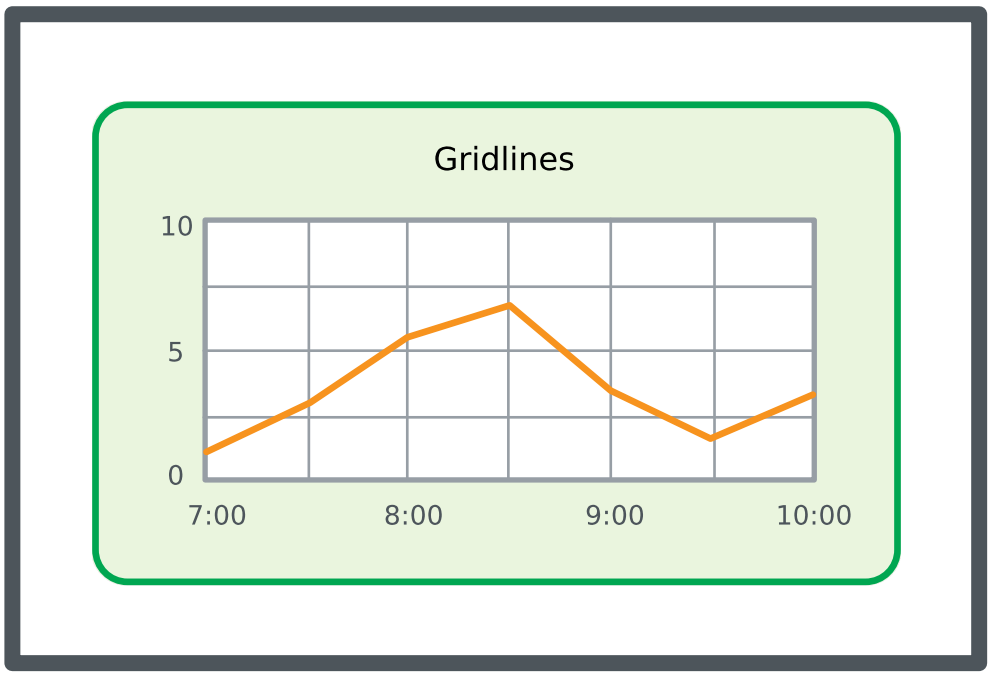


Figure – Grid lines, schematic

13.31 Scrolling the Trend Chart X-Axis to the Current Time

You scroll the x-axis rightmost point for fast navigation to the current time. This is useful when live update is disabled.

For more information, see section 13.30 “Trend Chart Axes” on page 105.

To scoll the trend chart x-axis to current time

1. In WorkStation, in the **System Tree** pane, select the trend chart you want to show.
2. On the **Trend Chart** navigation bar, click the **Current time** button  .

The trend chart displays the trend chart with the client's current time as the rightmost x-axis point.

13.32 Editing the Trend Chart Settings

You configure the scale of the trend chart axes, the presentation of series, and the calculation method to make it easier to interpret the series, representing the trend log records, in the trend chart.

For more information, see section 13.30 "Trend Chart Axes" on page 105.

To edit the trend chart settings

1. In WorkStation, in the **System Tree** pane, select the trend chart.
2. On the **Trend Chart** toolbar, click **Open trend chart settings** button  .
3. In the **Trend Chart Settings** dialog box, edit the trend chart settings.
4. Click **OK**.

13.33 Configuring the X-Axis with a Relative Time Span

You set the trend chart time span of the x-axis relative to the series current end point time to automatically adapt the trend chart to display the current time and the latest records within the specific time span.

For more information, see section 13.30 "Trend Chart Axes" on page 105.

To configure the x-axis with a relative time span

1. In WorkStation, in the **System Tree** pane, select the trend chart you want to configure.
2. In the trend chart view, on the toolbar, click **Open trend chart settings** button  .
3. In the **Trend chart settings** dialog box, in the **Time mode** box, select **Relative (to current time)**.
4. In the **Time span** box, type the length of the x-axis to display before the current time.
5. Click **OK**.

The x-axis is now configured with a relative time span.

13.34 Configuring the X-Axis with an Absolute Time Span

You configure the time span of a trend chart x-axis to display the records that are recorded within a specific period of time.

For more information, see section 13.30 “Trend Chart Axes” on page 105.

To configure the x-axis with an absolute time span

1. In WorkStation, in the **System Tree** pane, select the trend chart you want to configure.
2. In the trend chart view, on the toolbar, click the **Open trend chart settings** button  .
3. In the **Trend chart settings** dialog box, the **Time mode** box, select **Absolute (start and end time)**.
4. In the **Start time** boxes, type the x-axis leftmost date and time.
5. In the **End time** boxes, type the x-axis rightmost date and time.
6. Click **OK**.

The x-axis is now configured with an absolute time span.

13.35 Configuring the Trend Chart Time Zone

You display the time of the records in local time, server time, or in the time of a predefined time zone. By changing the time zone settings you make it easier to interpret the time stamp.

For more information, see the *Time Zone Modes in a Trend Chart* topic on WebHelp.

To configure the trend chart time zone mode

1. In WorkStation, in the **System Tree** pane, select the trend chart you want to configure.
2. In the trend chart view, on the toolbar, click the **Open trend chart settings** button  .
3. In the **Trend Chart Settings** dialog box, in the **Time zone** box, select a time zone to display the trend chart time stamps in:
   - Select **Local time** to display the time stamps in real time from the perspective of the client.
   - Select a predfined time zone to display the time stamps in real time from the perspective of the selected time zone.
4. Click **OK**.

The x-axis is now set according to the selected time zone.

13.36 Showing Trend Chart Grid Lines

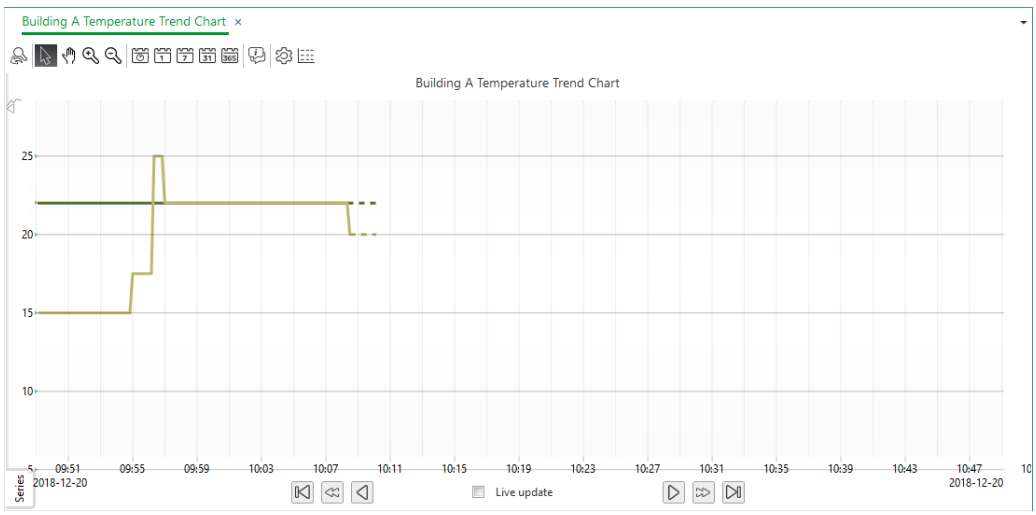
You show the trend chart grid lines on the x-axis and the y-axis to make the chart easier to read.

For more information, see the *Trend Chart Settings Dialog Box – Axes Tab* topic on WebHelp.

To show trend chart grid lines

1. In WorkStation, in the **System Tree** pane, select the trend chart you want to configure.
2. On the **Trend Chart** toolbar, click the **Open trend chart settings** button .
3. Below the **Time zone** box, select **Show grid lines** to show grid lines originating from the x-axis scale.
4. Select **Show left grid lines** or **Show right grid lines** to show grid lines originating from the y-axis scale.
5. Click **OK**.

Grid lines are now shown in the trend chart. Repeat the procedure to hide the grid lines.



13.37 Manually Configuring the Y-Axis Scale

You manually configure the trend chart y-axis to have a fixed scale. The trend chart has two y-axes, one to the left and one to the right. You can use this procedure to scale both axes.

For more information, see section 13.30 “Trend Chart Axes” on page 105.

To manually configure the y-axis scale

1. In WorkStation, in the **System Tree** pane, select the trend chart you want to configure.

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2. On the **Trend Chart** toolbar, click **the Open trend chart settings** button  .
3. In the **Trend chart settings** dialog box, clear **Auto scale left y-axis** and **Auto scale right y-axis**.
4. In the **Left y-axis minimum** and **Right y-axis minimum** boxes, type the minimum value of the y-axis.
5. In the **Left y-axis maximum** and **Right y-axis maximum** boxes, type the maximum value of the y-axis.
6. Click **OK**.

The y-axis is now set with a fixed scale.

13.38 Automatically Configuring the Y-Axis Scale

You configure the trend chart to automatically scale the y-axis. The trend chart has two y-axes, one to the left and one to the right. You can use this procedure to scale both axes.

For more information, see section 13.30 “Trend Chart Axes” on page 105.

To automatically configure the y-axis scale

1. In WorkStation, in the **System Tree** pane, select the trend chart you want to configure.
2. On the **Trend Chart** toolbar, click **the Open trend chart settings** button  .
3. In the **Trend Chart Settings** dialog box, select **Auto Scale left y-axis** and **Auto Scale right y-axis**.
4. Click **OK**.

The y-axis scale is now set automatically and updated with the presented series.

13.39 Activating Trend Chart Live Update

You activate the live update of a trend chart to automatically update the trend chart with the latest records.

For more information, see section 13.25 “ Trend Charts” on page 95.

To activate trend chart live update

1. In WorkStation, in the **System Tree** pane, select the trend chart on which you want to activate live update.
2. In the Trend Chart View, in the navigation bar, select **Live update**.

13.40 Creating a Trend Chart that Monitors a Variable in Real-Time

You create a trend chart that monitories a variable in real-time, for example, to access and check the current status of the variable.

For more information, see the *Real-Time Plotting* topic on WebHelp.

To create a trend chart that monitors a variable in real-time

1. In WorkStation, in the **System Tree** pane, select the folder or EcoStruxure BMS server where you want to create the trend chart.
2. On the **File** menu, point to **New** and then click **Trend**.
3. In the **Create Object** wizard, in the object type list, select **Trend Chart**.
4. In the **Name** box, type a name for the trend chart.
5. In the **Description** box, type a description.
6. Click **Next**.
7. In the **Configure Trend Chart** page, in the **Time mode** box, select **Absolute** to manually specify the x-axis start and end point.
8. In the **Start time** box, type the absolute start time (the leftmost point of the x axis).
9. In the **End time** box, type the absolute end time (the rightmost point of the x axis).
10. In the **Auto scale left y-axis** box, select **True** so the y-axis adapts itself to displayed series.
11. Click the **Add**  button.
12. In the **Create Object** wizard, in the object type list, select **Real Time Trend Series**.
13. In the **Name** box, type a name for the series.
14. In the **Description** box, type a description.
15. Click **Next**.
16. In the **Configure Real-time Trend Series** page, in the **Display variable** box, enter the variable you want to display in the trend chart.
17. In the **Weight** box, select the weight of the series.
18. In the **Show markers** box, select **True** to display a marker for each recorded.
19. Click **Create**.
20. In the **Configure real-time trend series** dialog box, click **Create**.

The real-time trend series trend chart is created in the selected folder.

13.41 Attaching a Calculation Method to a Trend Chart Series

You attach a calculation method to a trend chart series to process the recorded values and present the result.

For more information, see section 14.15 “Calculation Methods” on page 119.

To attach a calculation method to a trend chart series

1. In WorkStation, in the **System Tree** pane, select the trend chart you want to attach a calculation method to.
2. On the **Trend Chart** toolbar, click **Open trend chart settings** button  .
3. In the **Trend Chart Settings** dialog box, click the **Calculations** tab.
4. In the **Data series** box, select the series you want to add a calculation method to.
5. In the **Calculation method** box, select a calculation method.
6. Select **Delta over period** if the calculation method is a delta calculation with periods.
7. In the **Period** box, select the time span for which the calculation method is to be executed.

   NOTE:
   - If Custom is selected in the **Period** box, enter a custom time span for which the calculation method is to be executed in the **Custom period** box and the time when you want the custom period to start in the **Custom period alignment** boxes.
   - To calculate the required number of records for a trend log, multiply the number of records in one day with the number of days you want the trend log to record. For example, the interval of the trend log is set to 1 hour, then this gives 24 recorded values per day. The trend log should record at least one month of recorded values equal to 31 days. For example, the number of records = 24 x 31 = 744.
8. In the **Custom period** box, enter a custom time span for which the calculation method is to be executed.
9. In the **Custom period alignment** boxes, enter the time when you want the custom period to start.
10. Click **OK**.

A calculation method is now attached to the series.

13.42 Adding a Trend Log Series to a Trend Chart

You add a trend log series to a trend chart to compare trend data from different logs or variables.

For more information, see the *Trend Series* topic on WebHelp.

To add a trend log series to a trend chart

1. In WorkStation, in the **System Tree** pane, select the trend chart you want to add a trend log series to.
2. In the **System Tree** pane, select the trend log you want to add.
3. Drag the trend log from the **System Tree** pane to the trend chart diagram.
4. Click **Save**.

13.43 Adding a Real-Time Trend Series to a Trend Chart

You add a real-time trend series to a trend chart to compare trend data from different logs or variables.

For more information, see the *Trend Series* topic on WebHelp.

To add a real-time trend series to a trend chart

1. In WorkStation, in the **System Tree** pane, select the trend chart you want to add a trend series to.
2. On the **File** menu, click **Properties**.
3. In the **Trend Chart Properties** dialog box, under **Series Configuration Settings**, click the **Add** button  .
4. In the **Create Object** wizard, in the object type list, select **Real Time Trend Series**.
5. In the **Name** box, type a name for the series.
6. In the **Description** box, type a description for the series.
7. Click **Next**.
8. In the **Configure Real-time Trend Series** page, in the **Display variable** box, enter the path to the variable you want to display in the trend chart.
9. In the **Weight** box, enter the line weight of the series.
10. In the **Show markers** box, select **True** to display a marker for each recorded value.
11. Click **Create**.
12. Click **OK**.

14 Trend Log Lists

What's in This Chapter?

14.1 Trend Log Lists in WorkStation

A trend log list displays all values in the trend log in a list.

You can create a trend log list directly from a trend log and refresh the values.

You can manually add records to a trend log list for any type of trend log.

14.1.1 Trend Log List Display

A trend log list can be displayed in a number of ways.

For more information, see section 14.6 “Trend Log List Display ” on page 116.

14.1.2 Export of Trend Log Lists and Records

Trend log lists and records can be exported in two different formats:

- CSV
- XML

For more information, see section 14.12 “Export of Trend Log Lists and Records ” on page 118.

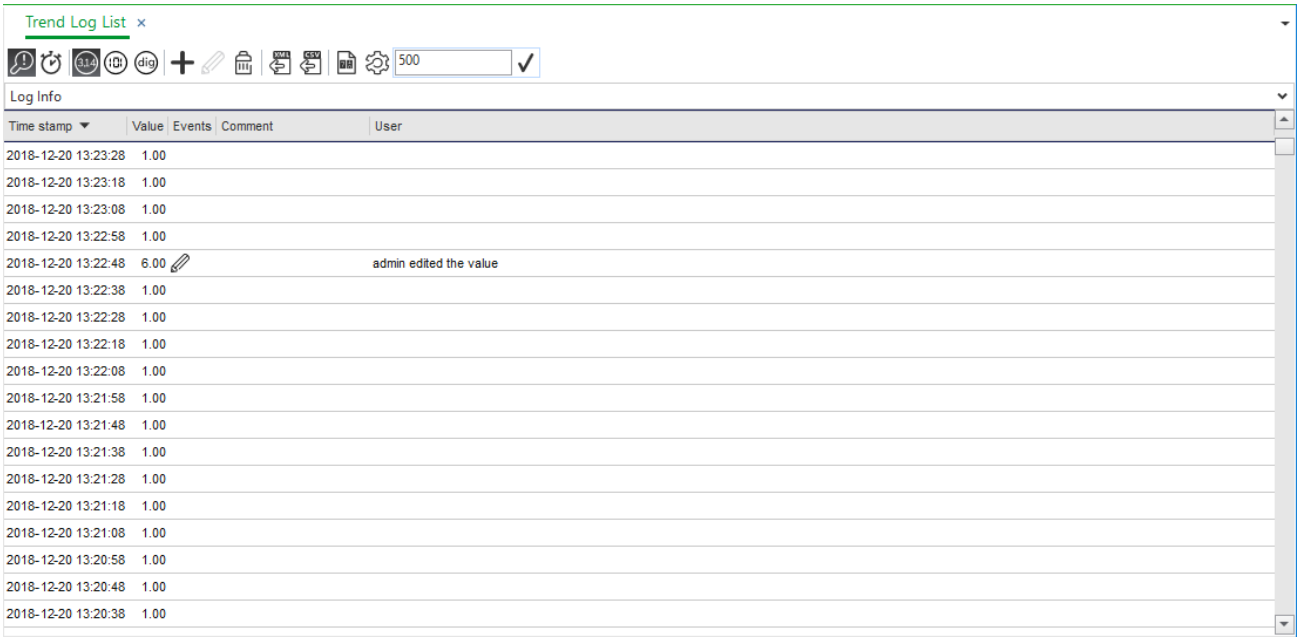


Figure – Trend log list

14.2 Opening a Trend Log List

You open the trend log list for viewing.

For more information, see section 15.1 “How Trend Logs Work” on page 127.

To open a trend log list

1. In WorkStation or WebStation, in the **System tree** pane, select the trend log list you want to open.

The trend log list is now open.

14.3 Creating a Trend Log List

You create a trend log list to get a list of the records in the trend log.

For more information, see section 14.1 “Trend Log Lists in WorkStation” on page 114.

To create a trend log list

1. In WorkStation, in the **System Tree** pane, select the trend log or the variable you want to create the trend log list from.
2. On the **Actions** menu, point to **View**, point to **Trend log lists**, and then click **New Trend log list**.
3. Click the **Save** button .
4. Browse to where you want to save the trend log list.
5. Click **Save**.

14.4 Refreshing a Trend Log List

You have to manually refresh the trend log list to display recently recorded values.

For more information, see section 14.1 “Trend Log Lists in WorkStation” on page 114.

To refresh a trend log list

1. In WorkStation, in the **System Tree** pane, select the trend log list.
2. On the main toolbar, click the **Refresh** button  .
3. Manually scroll in the list to see the latest records.

The trend log list is now refreshed.

14.5 Copying a Trend Log Record

You copy rows in the trend log list to the clipboard if you want to paste them into other programs, such as Microsoft Excel.

For more information, see section 14.1 “Trend Log Lists in WorkStation” on page 114.

To copy a trend log record

1. In WorkStation, in the **System Tree** pane, select the trend log list you want to open.
2. In the **Trend Log List**, select the row you want to copy.
3. On the **Edit** menu, click **Copy**.

The text is now copied to the clipboard.

14.6 Trend Log List Display

A trend log list can be displayed in a number of ways.

You can present the values in the trend log as decimals or as bitstrings. You can hide or display events in a trend log list to make the reading easier. Events that have a value or comment cannot be hidden and are always displayed.

The settings can be saved so that the trend log list is displayed in the same way the next time you open it.

14.7 Displaying or Hiding Events in a Trend Log List

You hide or display events in a trend log list to make the reading easier. Events that have a value or comment cannot be hidden and are always displayed. For example, as a Record was added, or as a Record was commented.

For more information, see section 14.1 “Trend Log Lists in WorkStation” on page 114.

To display or hide events in a trend log list

1. In WorkStation, in the **System Tree** pane, select the trend log list you want to display.
2. On the **Trend Log List** toolbar, click the **Events** button  .

Events are now displayed in the trend log list. Repeat the procedure to hide the events.

14.8 Displaying Trend Log List Values as Decimals

You present trend log list values as decimals.

For more information, see section 14.1 “Trend Log Lists in WorkStation” on page 114.

To display trend log list values as decimals

1. In WorkStation, in the **System Tree** pane, select the trend log list.
2. On the **Trend Log List** toolbar, click the **Show decimal values** button  .

The values in the trend log list are now shown as decimals.

14.9 Displaying Trend Log List Values as Bitstrings

You present trend log list values as bitstrings.

For more information, see section 14.1 “Trend Log Lists in WorkStation” on page 114.

To display trend log list values as bitstrings

1. In WorkStation, in the **System Tree**, select the trend log list values you want to display as bitstrings
2. On the **Trend Log List** toolbar, click the **Show values as bitstrings** button  .

The values in the trend log list are now shown as bitstrings.

14.10 Saving a Trend Log List Setting

You save the trend log list setting if you want the trend log list to be displayed in the same way the next time you open it.

For more information, see section 14.1 “Trend Log Lists in WorkStation” on page 114.

To save a trend log list setting

1. In WorkStation, in the **System Tree** pane, open the trend log list.
2. Change the settings to fit your preferences.
3. On the **Trend Log List** toolbar, click the **Save** button  .

14.11 Viewing a Trend Log in a Temporary Trend Log List

You open a trend log in a temporary trend log list to view the recorded values in a list. When you close the temporary trend log list, the list is not saved.

For more information, see the *Temporary Trend Log Lists* topic on WebHelp.

To view a trend log in a temporary trend log list

1. In WorkStation, in the **System Tree** pane, select the folder or EcoStruxure BMS server where the trend log is located.
2. Select the trend log you want to open as a temporary trend log list.
3. On the **Actions** menu, point to **View** and then click **In Trend Log List**.

(In FM: TaskClosing) The trend log list is displayed in the work area under a generic name.

14.12 Export of Trend Log Lists and Records

Trend log lists and records can be exported in two different formats:

- CSV
- XML

CSV

CSV (Comma separated values) is a standard file format for digital storage of data structured in a table of lists form. The CSV format can be used by Excel and in databases such as SQL.

XML

XML (Extensible Markup Language) is a standard file format for structured data and can be use with a lot of different tools.

14.13 Exporting a Trend Log List to XML format

You export a trend log list to XML format if you want to open it in an XML editor for viewing and processing.

> **IMPORTANT:** When you are exporting log data and then importing it to another EcoStruxure BMS, change the time zone to UTC before the export to make sure the imported time stamps show the correct time

For more information, see section 14.12 “Export of Trend Log Lists and Records ” on page 118.

To export a trend log list to XML format

1. In WorkStation, in the **System Tree** pane, select the trend log list you want to export.

Continued on next page

2. On the **Trend Log List** toolbar, click the **Export to .XML** button  .
3. Browse to the folder where you want to save the file.
4. In the **File name** box, type a name.
5. Click **Save**.

The trend log list is now exported to XML format.

14.14 Exporting a Trend Log List to CSV Format

You export a trend log list to CSV format if you want to open it for viewing and processing, for example, in Microsoft Excel.

For more information, see section 14.12 “Export of Trend Log Lists and Records ” on page 118.

To export a trend log list to CSV format

1. In WorkStation, in the **System Tree** pane, select the trend log list you want to export.
2. On the **Trend Log List** toolbar, click the **Export to .CSV** button  .
3. Browse to the folder where you want to save the file.
4. In the **File name** box, type a name.
5. Click **Save**.

The trend log list is now exported to CSV format.

14.15 Calculation Methods

Use a calculation method to process the records of the trend log before presenting them in a trend log list or a trend chart. The original records in the trend log are not affected by the calculation method. The calculation method is applied to the trend log records grouped by a specific time interval.

The following calculation methods are available:

- None
- Maximum
- Minimum
- Average
- Sum
- Delta
- Delta over period
- Meter consumption

All calculation methods might not be available in all features of EcoStruxure Building Operation.

NOTE:

- Adapt the period so it contains the required amount of records to generate a correct calculation.
- If a calculation method is connected to an interval trend log with delta, make sure that the period and delta are adapted for the calculation.

14.15.1 None

No calculation is performed. The actual values are presented.

14.15.2 Maximum

The maximum value of each period is presented.

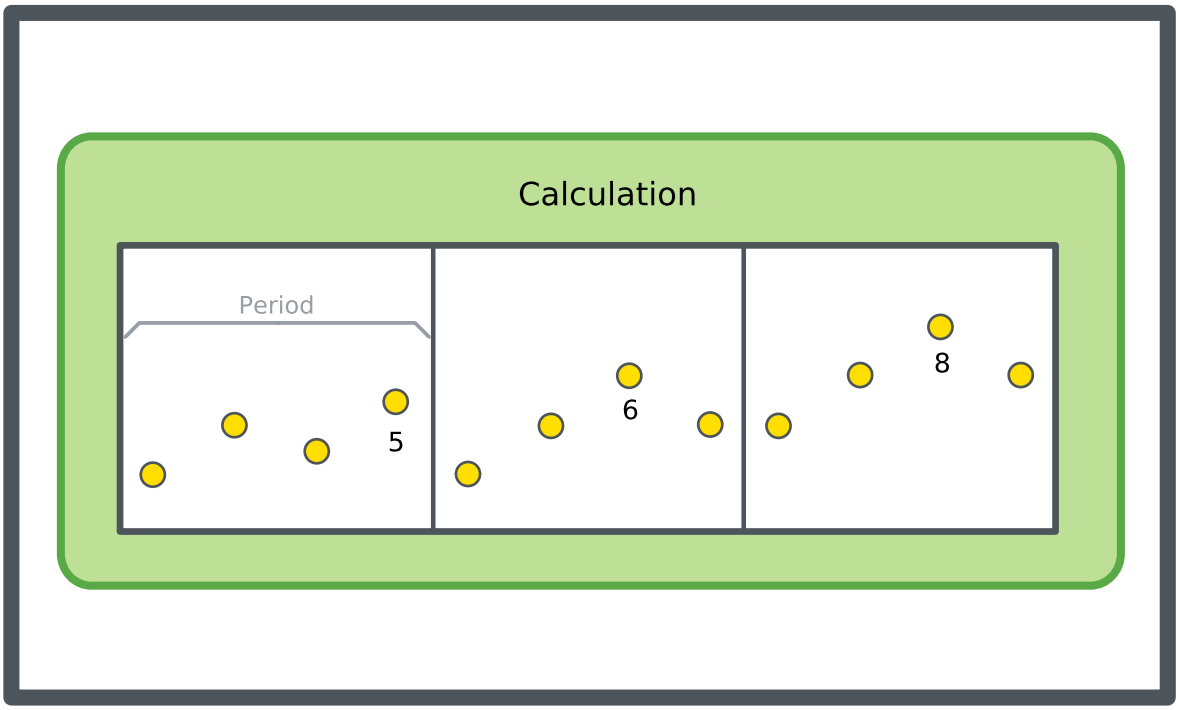


Figure – Maximum calculation method, schematic

IMPORTANT: If the log point is offline or no value is produced during the interval, no value is displayed.

14.15.3 Minimum

The minimum value of each period is presented.

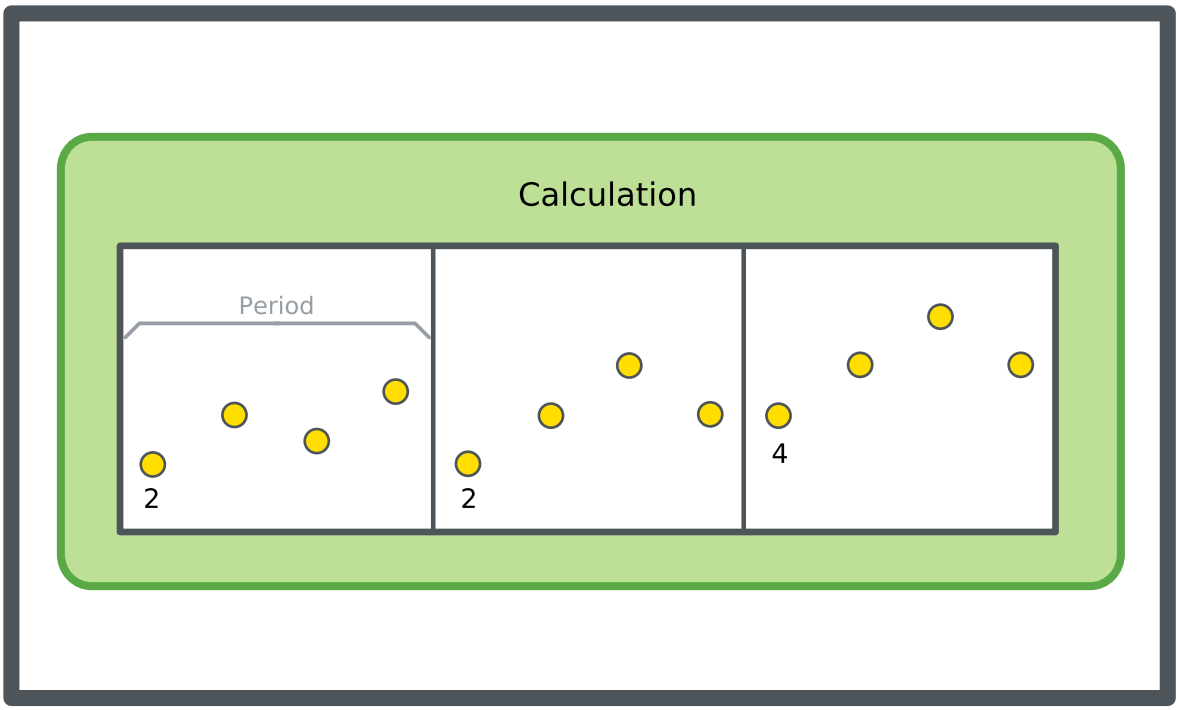


Figure – Minimum calculation method, schematic

IMPORTANT: If the log point is offline or no value is produced during the interval, no value is displayed.

14.15.4 Average

The average of the values in each period is calculated and presented.

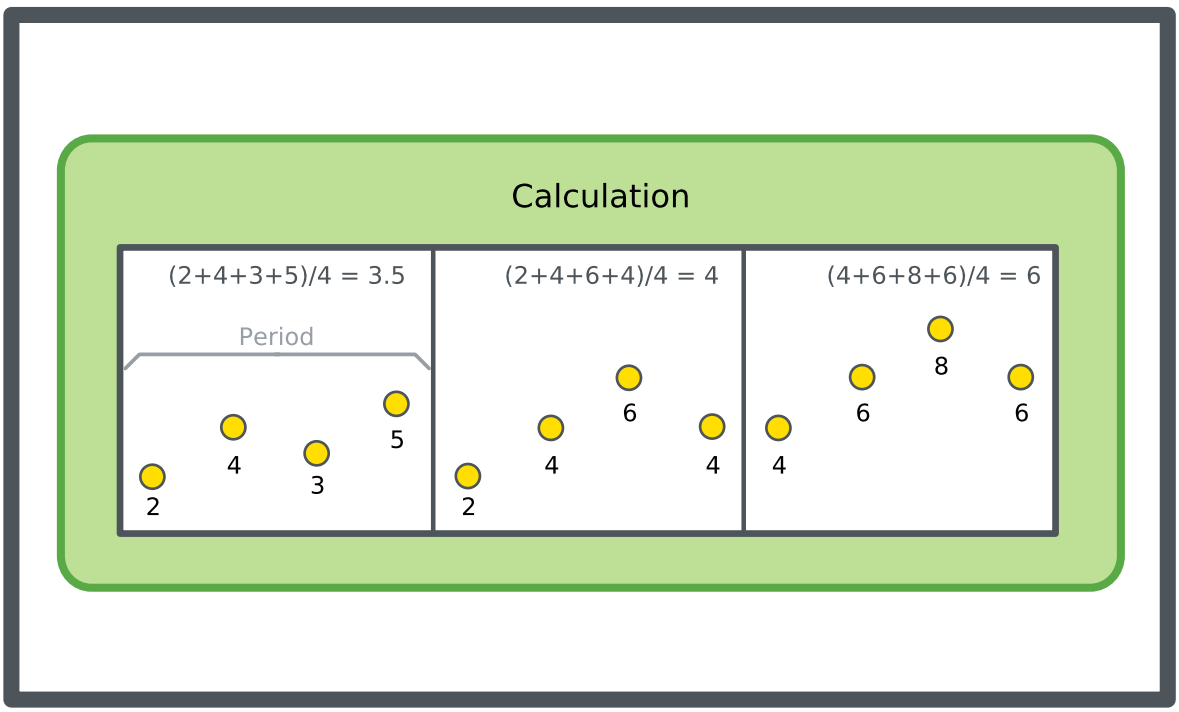


Figure – Average calculation method, schematic

IMPORTANT: If the log point is offline or no value is produced during the interval, no value is displayed.

14.15.5 Sum

The sum of the values in each period is calculated and presented.

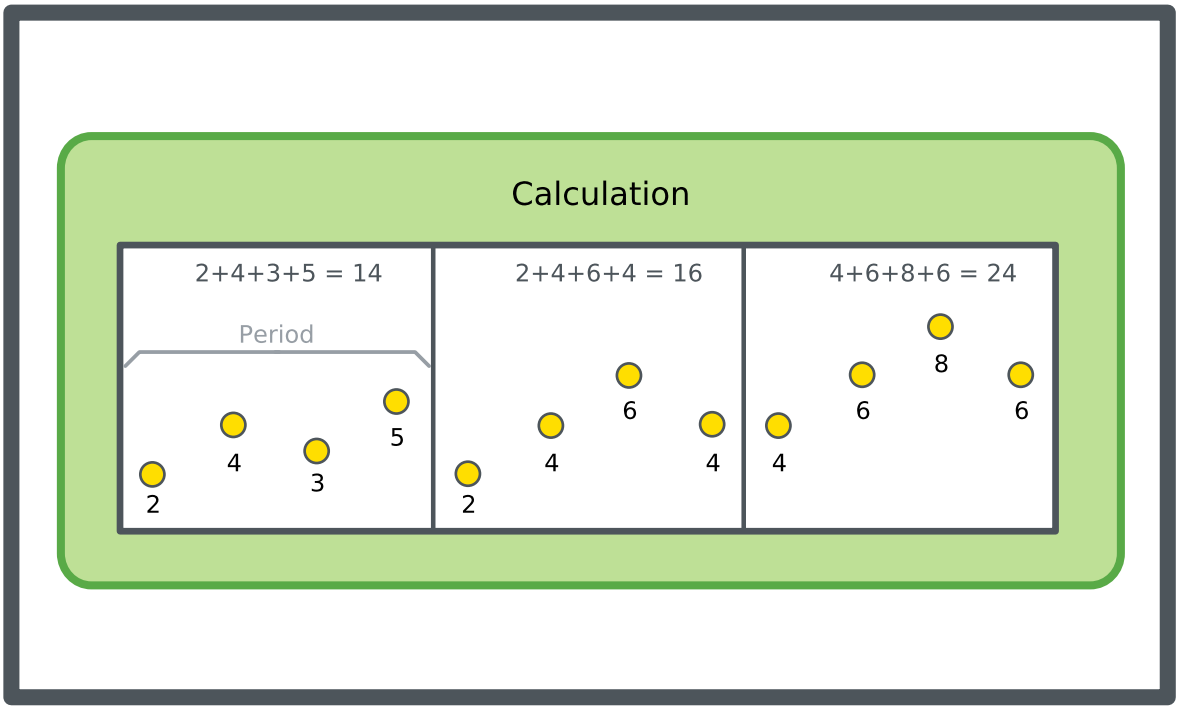


Figure – Sum calculation method, schematic

14.15.6 Delta

The change to the previous value is calculated and presented.

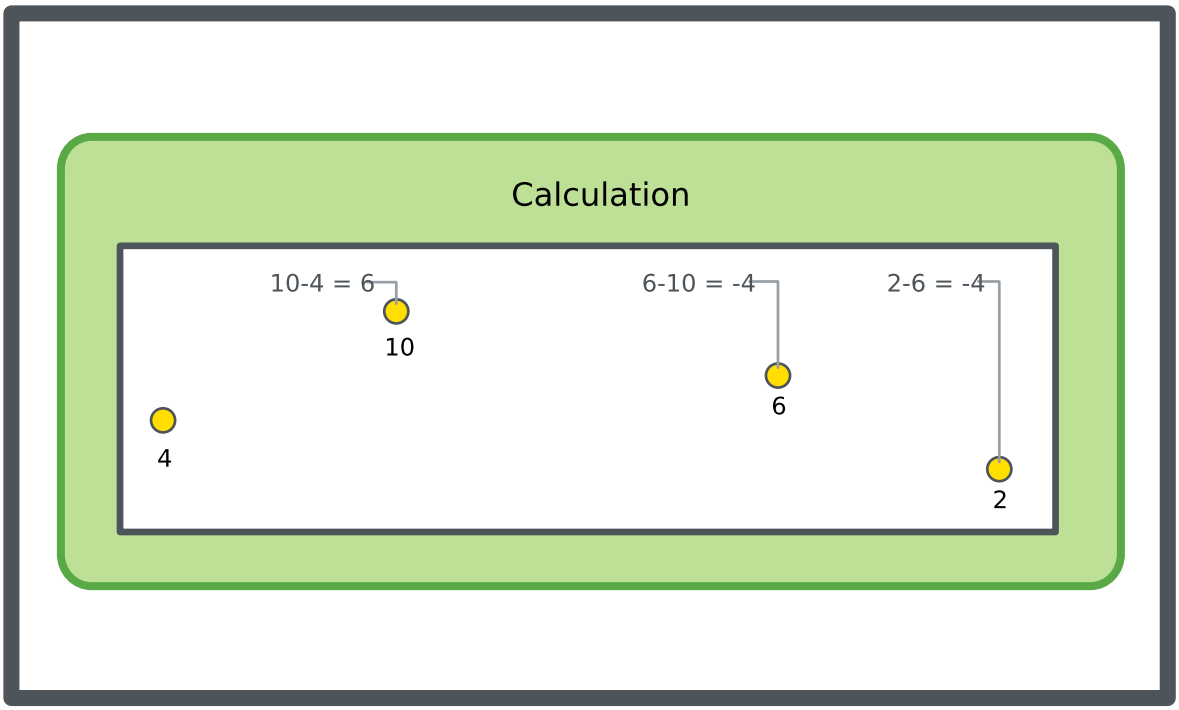


Figure – Delta calculation method, schematic

14.15.7 Delta over Period

The change over a period is calculated and presented. The value at the period limit is often interpolated, based upon the last value in the old period and the first value in the new period.

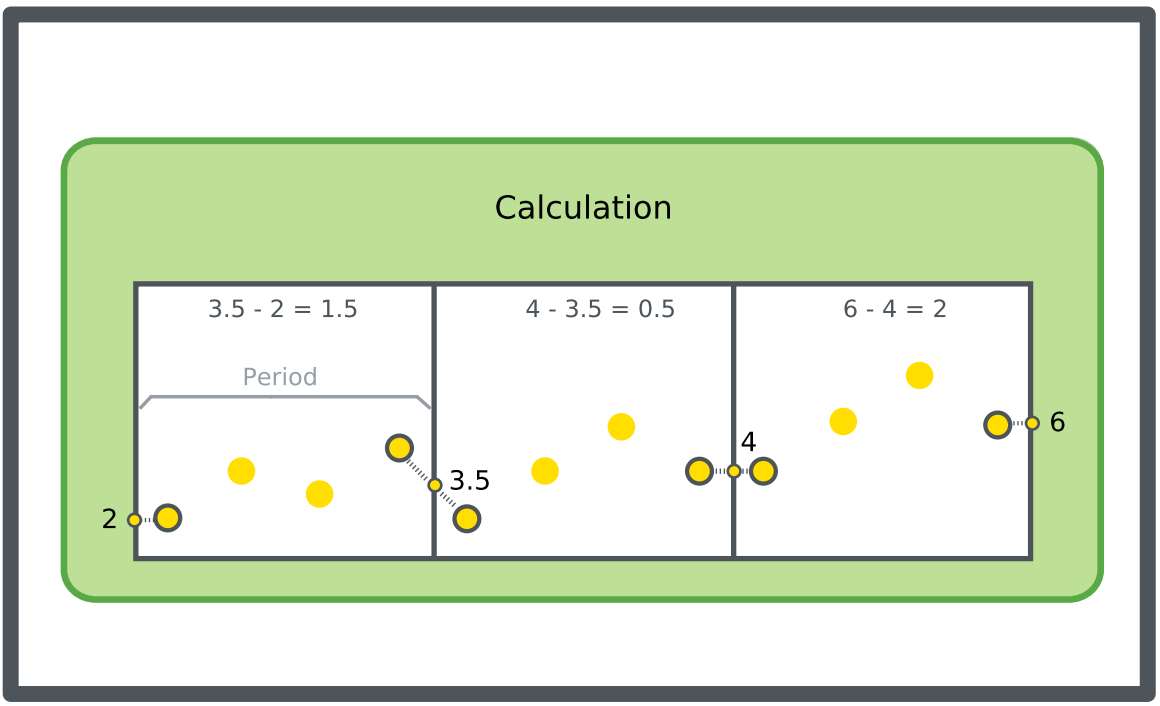


Figure – Delta over period calculation method, schematic

14.15.8 Meter Consumption

Meter consumption is a delta over period calculation with meter functionality. For more information, see section 15.7 “Meter Function” on page 137.

14.15.9 Period Timestamps in Trend Charts and Trend Log Lists

When a calculated value for a period is presented, the middle of the period is used as the timestamp.

Example:

The calculated value for the period 8:00-9:00 is stamped 8:30. If there is a value at 9:01, the next period is 9:00-10:00, which is stamped as 9:30. The full period may not have passed yet, but the value can be presented even if parts of the period are in the future.

14.16 Attaching a Calculation Method to a Trend Log List

You attach a calculation method to a trend log list to process the recorded values and present the result.

For more information, see section 14.15 “Calculation Methods” on page 119.

To attach a calculation method to a trend log list

1. In WorkStation, in the **System Tree** pane, select the trend log list you want to attach a calculation method to.
2. On the **Trend Log List** toolbar, click the **Open trend log list settings** button  .
3. In the Trend Log List properties, in the **Calculation method** box, select a calculation.
4. In the **Delta over period** box, select **True** if the calculation method is a delta calculation with periods.
5. In the **Period** box, select the time span for which the calculation method is to be executed.

   NOTE:

   - If Custom is selected in the **Period** box, enter a custom time span for which the calculation method is to be executed in the **Custom period** box and the time when you want the custom period to start in the **Custom period alignment** boxes.
   - To calculate the required number of records for a trend log, multiply the number of records in one day with the number of days you want the trend log to record. For example, the interval of the trend log is set to 1 hour, then this gives 24 recorded values per day. The trend log should record at least one month of recorded values equal to 31 days. For example, the number of records = 24 x 31 = 744.

6. In the **Custom period** box, enter a custom time span for which the calculation method is to be executed.
7. In the **Custom period alignment** boxes, enter the time when you want the custom period to start.
8. Click **OK**.

A calculation method is now attached to the trend log list.

14.17 Editing or Commenting a Trend Log Record

You edit or comment a trend log record through the trend log list, for example, to correct a corrupt value or comment a specific record.

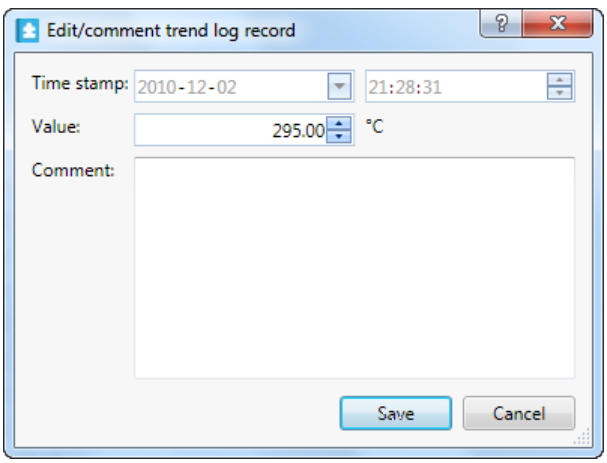
NOTE:

- When editing an extended trend log record, the changes do not affect corresponding record in the connected trend log.

For more information, see the *Trend Log Lists* topic on WebHelp.

To edit a trend log record

1. In WorkStation, in the **System Tree** pane, select the trend log list you want to edit.
2. Select the record you want to edit, and then click the **Edit/comment trend log record** button .
3. In the **Edit/comment trend log record** dialog box, in the **Value** box, type the new value.



4. In the **Comment** box, type a comment.
5. Click **Save**.
6. On the main toolbar, click the **Refresh** button .

The record is now edited, when the list is refreshed the new record with comment is displayed. All edits are stored and you can display a records history.

14.18 Manually Adding a Trend Log Record to a Trend Log List

You manually add trend log records if a log record has been missed and you want to complete the list or to add old values to compare the log record history to.

For more information, see section 14.1 “Trend Log Lists in WorkStation” on page 114.

To manually add a trend log record to a trend log list

1. In WorkStation, in the **System Tree** pane, select the folder or EcoStruxure BMS server where the trend log list is located.
2. Select the trend log list to which you want add a record.
3. On the trend log list toolbar, click **Add trend log record**  .
4. In the **Add trend log record** dialog box, in the **Time stamp** box, enter the date and time of the new value.
5. In the **Value** box, enter the value.
6. In the **Comment** box, type a comment.
7. Click **Add record**.
8. Click **Close**.

The record is now added to the trend log list.

15 Trend Logs

What's in This Chapter?

15.1 How Trend Logs Work

You use trend logs to record values, such as a sensor. A trend log can also log consumptions, such as energy consumption or water consumption.

You can view a trend log as a trend log list or as a trend chart.

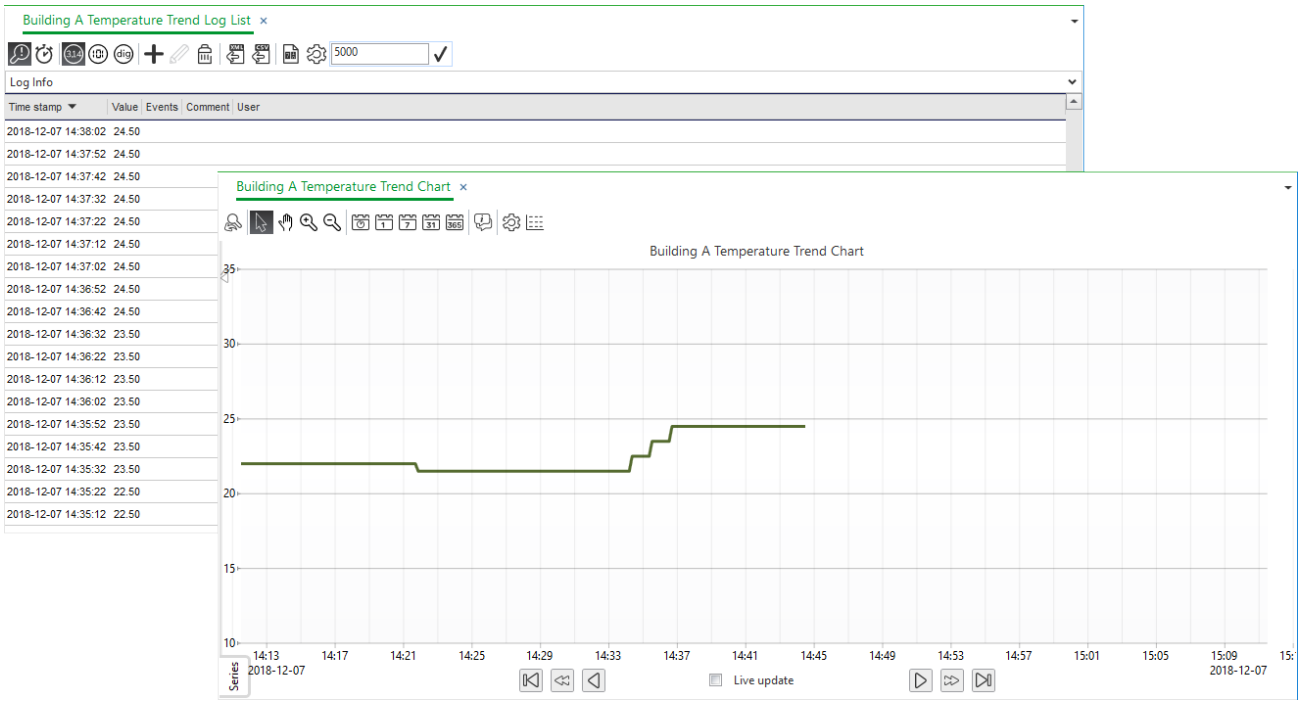


Figure – A trend list (upper left) and a trend chart (bottom right) in WorkStation

You can copy trend data between EcoStruxure Building Operation databases by exporting trend log data from a trend log list to an .XML file and then importing the trend log data from the .XML file to a trend log.

The .XML file contains a time stamp, value, and comment for each record. The file also contains the locale setting that you can edit in the .XML file.

```
<TrendLogValueRecord User="" Comment="" Events="" Value="24.50" Timestamp="2018-12-07 14:37:02"/>
<TrendLogValueRecord User="admin commented the value" Comment="Check why the temperature has
    gone up" Events="Record was commented" Value="24.50" Timestamp="2018-12-07 14:36:52"/>
<TrendLogValueRecord User="" Comment="" Events="" Value="24.50" Timestamp="2018-12-07 14:36:42"/>
<TrendLogValueRecord User="" Comment="" Events="" Value="23.50" Timestamp="2018-12-07 14:36:32"/>
<TrendLogValueRecord User="" Comment="" Events="" Value="23.50" Timestamp="2018-12-07 14:36:22"/>
<TrendLogValueRecord User="" Comment="" Events="" Value="23.50" Timestamp="2018-12-07 14:36:12"/>
```

Time stamp	Value	Events	Comment	User
2018-12-07 14:37:02	24.50			
2018-12-07 14:36:52	24.50		Check...	admin commented the value
2018-12-07 14:36:42	24.50			
2018-12-07 14:36:32	23.50			
2018-12-07 14:36:22	23.50			
2018-12-07 14:36:12	23.50			

Figure – Trend log list exported to an .XML file

For more information, see section 15.15 “Importing Log Data to a Trend Log” on page 148.

15.1.1 Trend Charts

Trend charts are a way to graphically present trend logs. A trend chart can contain one or more trend logs that are represented in the trend chart by lines or bars.

For more information, see section 13.1 “How Trend Charts Work” on page 87.

15.1.2 Trend Log Lists in WorkStation

A trend log list displays all values in the trend log in a list.

For more information, see section 14.1 “Trend Log Lists in WorkStation” on page 114.

15.1.3 Trend Log Lists in WebStation

A trend log list displays all values in the trend log in a list.

For more information, see the *Trend Log Lists in WebStation* topic on WebHelp.

15.1.4 Trend Logs in WebStation

A trend log is a collection of time-stamp values. In WebStation, you can create a trend log from a value or from a property in an object.

For more information, see the *How Trend Logs Work in WebStation* topic on WebHelp.

15.2 Trend Logs

A trend log is a collection of time-stamp values. In WebStation, you can create a trend log from a value.

15.2.1 Interval Trend Logs

The interval trend log collects data at a specific time interval. Each logged value is stored as a record in the trend log. Use this trend log when the logging interval is less than 1 hour.

For more information, see section 15.3 “Interval Trend Logs ” on page 130.

15.2.2 Extended Trend Logs

You use an extended trend log to transfer records from a trend log. An extended trend log can be connected to a trend log or connected in a series to another extended trend log. Only one extended trend log can be connected to a trend log.

For more information, see section 15.10 “Extended Trend Logs” on page 140.

15.2.3 Log Record Storage

All trend logs use circular storing. How many records a trend log can store before overwriting old ones depends on the trend log configuration.

For more information, see section 15.12 “Log Record Storage” on page 146.

15.2.4 Meter Function

The meter function adds meter properties to any trend log type to seamlessly handle consumption calculations independent of meter rollover or meter exchange.

For more information, see section 15.7 “Meter Function” on page 137.

15.3 Interval Trend Logs

The interval trend log collects data at a specific time interval. Each logged value is stored as a record in the trend log. Use this trend log when the logging interval is less than 1 hour.

You create interval trend logs using WorkStation or WebStation. In WorkStation, you configure the properties of the interval trend log to meet the specific needs of your site.

For example, in the figure below, the interval trend log records a variable every minute. The records are printed in a trend chart. The interval trend log does not record the values between the intervals.

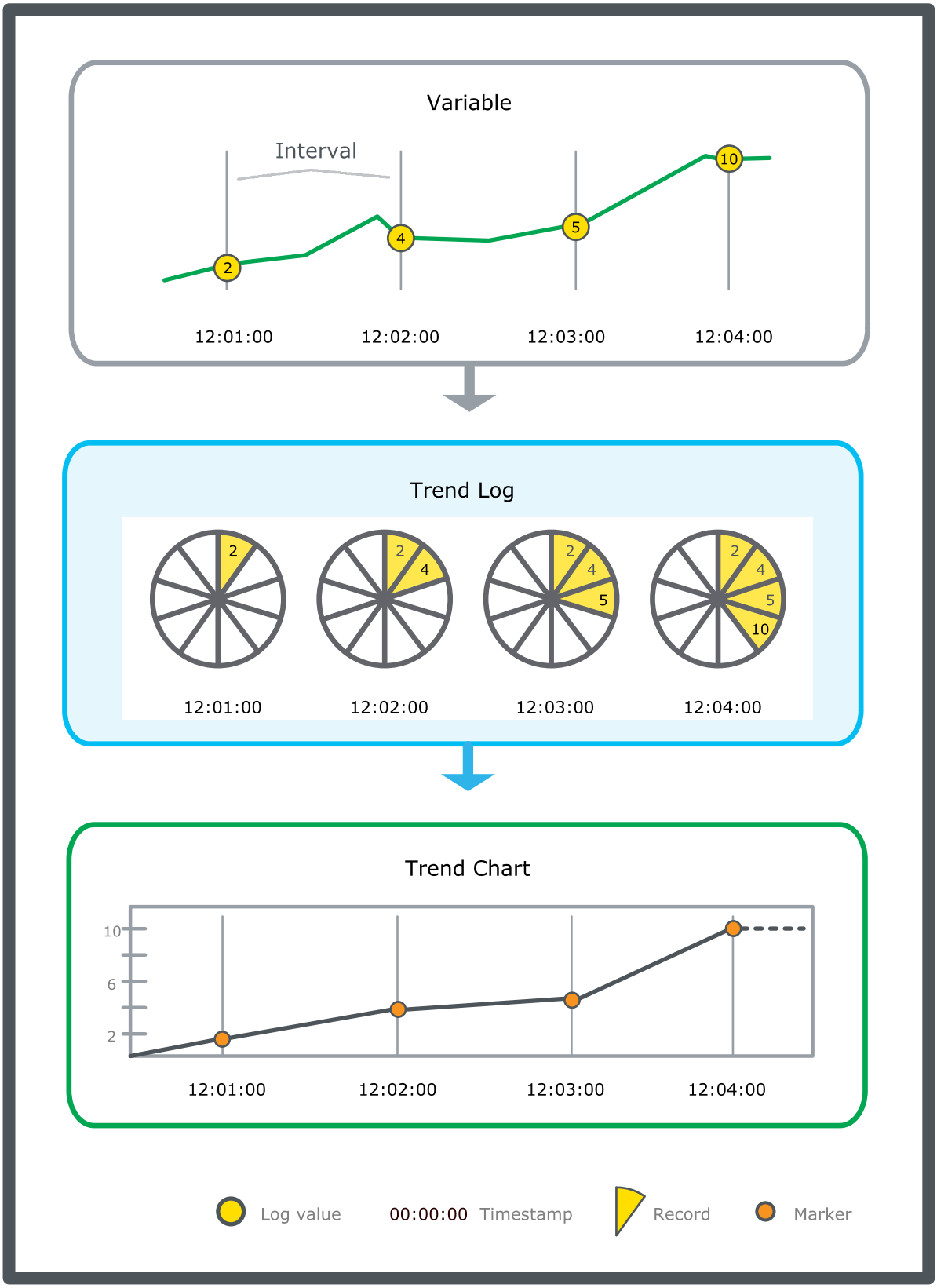


Figure – Interval trend log schematic.

The interval of the interval trend log is aligned with the activation time of the trend. For example, if the activation time is 09:01:00 and the interval is 15 minutes, the trend will log at 09:16:00, 09:31:00, 09:46:00, and so on.

15.3.1 Interval Time Zone

By default, the interval log uses UTC to determine when to take the next log sample. When the interval is longer than 1 hour and you want to continue to log that interval after a Daylight Savings Time change, use Server Local Time. For example, the log interval is every 24th hour at midnight and you want to continue to log at midnight even after a DST change, so you use Server Local Time. During the DST change in the Spring, the log sample will register after 23 hours. After the DST change in the Autumn, the log sample will register after 25 hours.

15.3.2 Interval Trend Log Delta

An interval trend log with delta can reduce the storage of similar records, and may not fill up the storage capacity as quickly as an interval trend log with no delta.

An interval trend log with delta checks the monitored value at each interval and records the new value if it differs from the previously recorded value by more than the delta. Delta is the difference between the current variable value and the last log value. To log a variable according to the time interval, use a delta of zero.

For example, in the figure below, the interval trend log records a variable every minute but only if the variable exceeds or falls below the delta of 3. The records are printed in a trend chart. Notice that the interval trend log with delta does not record the values between the intervals, or on intervals where the variable is within the delta.

NOTE:

- To log a variable only according to the time interval, set **Delta** to zero.

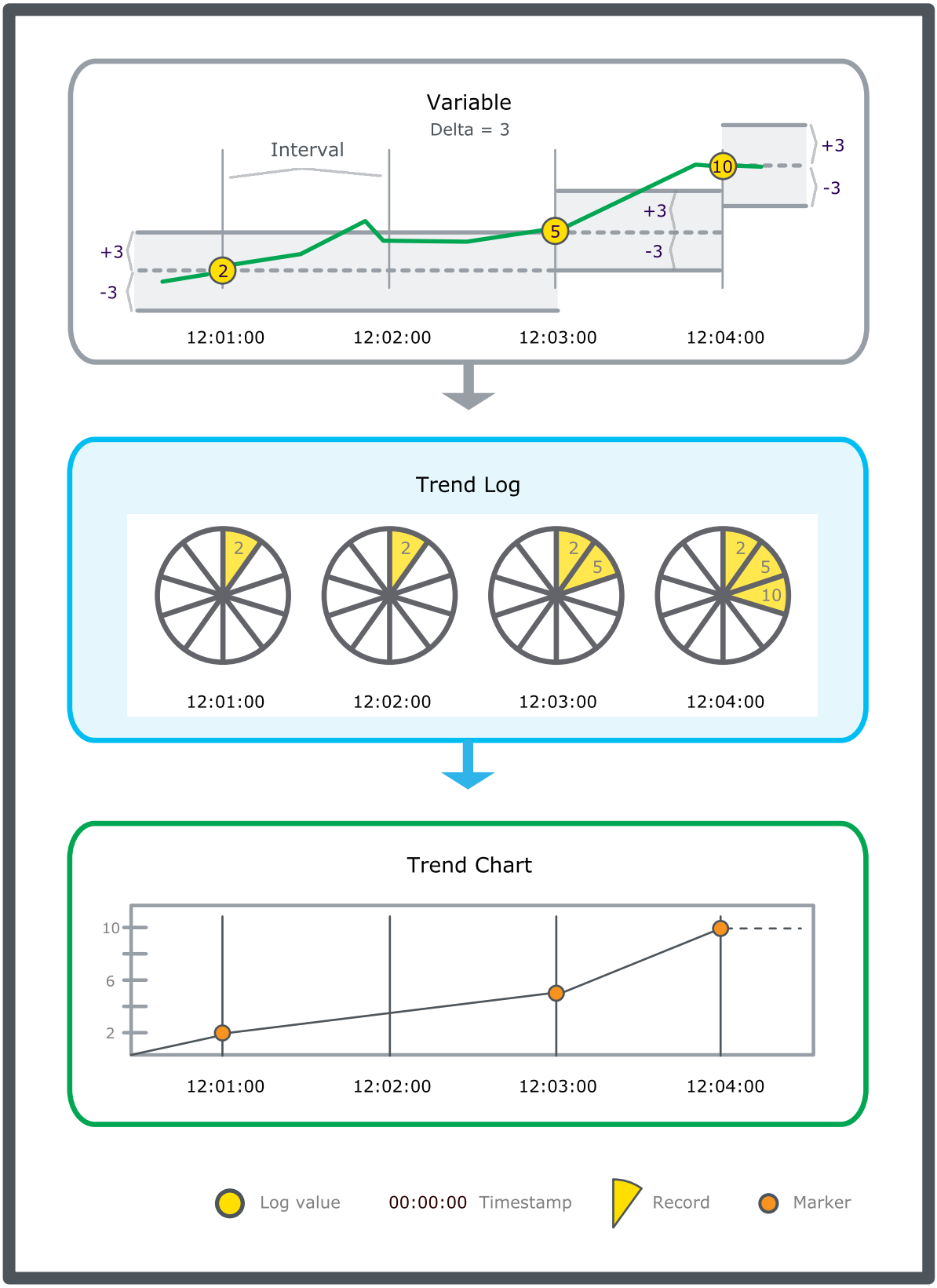


Figure – Interval trend log with delta schematic.

If an interval trend log has a delta and a calculation method that uses periods, make sure the period contains the required amount of records to generate a correct calculation. If the value does not differ from the previously logged value by more than the delta within the period, then none or too few values are recorded for the calculation.

NOTE:

- Adapt the period so it contains the required amount of records to generate a correct calculation.
- If a calculation method is connected to an interval trend log with delta, make sure that the period and delta are adapted for the calculation.

Interval trend log meter functionality

An interval trend log can be created with initial meter settings. The interval trend log supports the meter change command and meter consumption calculation. You can view the last meter change information on the interval trend log object. For more information, see section 15.7 “Meter Function” on page 137.

15.4 Creating an Interval Trend Log

You create an interval trend log to record a value of a variable at specified and regularly occurring increments of time.

For more information, see section 15.3 “Interval Trend Logs ” on page 130.

To create an interval trend log

1. In WorkStation, in the **System Tree** pane, select the folder or EcoStruxure BMS server where you want to create the trend log.
2. On the **File** menu, point to **New** and then click **Trend**.
3. In the **Create Object** wizard, in the object type list, select **Interval Trend Log**.
4. In the **Name** box, type a name for the trend log.
5. In the **Description** box, type a description for the trend log.
6. Click **Next**.
7. In the **Configure Interval Trend Log** page, in the **Logged variable** box, enter the variable that you want to log.
8. Click the **Set unit** button  .
9. In the **Unit Selection** dialog box, select a unit for the trend log values.
10. In the **Prefix** box, select the prefix of the unit.
11. Click **Select**.
12. In the **Delta** box, enter the minimum value change that triggers a new record.

Continued on next page

13. In the **Activation variable** box, enter a variable to start recording values when the acitvation variable is true
14. In the **Activation time** box, enter the exact time for the recording to begin.
15. In the **Interval time zone** box, select Server Local Time to avoid problems with DST for logging intervals more frequent than 1 hour.
16. In the **Interval** box, type the log frequency.
17. In the **Log size** box, type the log size to be stored before old values are overwritten.
18. In the **Available trend storage** box, check that the available number of records is not exceeded.
19. In the **Clear when enabled** box, select **True** to clear the trend log every time the trend log is enabled.
20. Click **Next**.
21. In the **Initial Meter Settings** page, in the **Set initial meter** box, select **True** to enable the meter function.
22. In the **Start time** box, enter the time when the meter was installed.
23. In the **Start value** box, enter the value of the new meter when it was installed.
24. In the **Min value** box, enter the first value of the new meter after roll-over.
25. In the **Max value** box, enter the last value of the new meter before roll-over.
26. Click **Next**.
27. In the **Connect Objects to the Trend Log** page, in the **Extended Trend Log** box, click the Browse button to create an extended trend log and connect it to the trend log.
28. In the **Trend Log List** box, click the Browse button to create a trend log list and connect it to the trend log.
29. In the **Trend Chart** box, click the Browse button to either create a new trend chart or connect the interval trend log to an existing trend chart.
30. Click **Create**.

15.5 Configuring an Interval Trend Log

You configure the properties of an interval trend log to meet the unique needs of your site.

For more information, see section 15.3 “Interval Trend Logs ” on page 130.

To configure an interval trend log

1. In WorkStation, in the **System Tree** pane, click the interval trend log you want to configure.

2. On the **File** menu, click **Properties**.
3. In the properties dialog box, click the **Basic** tab.
4. Edit the basic properties:

Property	Description
Status	Displays the status of the trend log.
Enabled	Displays **True** if the trend log is enabled.
Logged variable	Enter the variable you want to log.
Delta	Select the minimum value change that triggers a new record. For more information, see the *Interval Trend Log Delta* topic on WebHelp.
Activation variable	Enter the variable that makes the trend log start recording values when the variable is **True**. For more information, see the *Trend Log Activation* topic on WebHelp.
Activation time	Specify the time when the trend log is to start recording values. For more information, see the *Trend Log Activation* topic on WebHelp.
Interval	Type how often to log the variable. The interval defines the time between two log records.
Log size	Select the number of records to store before old records are overwritten, including internal records generated by the trend log. For more information, see section 15.12 “Log Record Storage” on page 146.
Clear when enabled	Select **True** to clear the trend log when it is enabled.

5. Click the **Meter Info** tab.
6. Edit the meter properties:

Property	Description
Is meter log	Select **True** if the trend log meter function is active. For more information, see section 15.7 “Meter Function” on page 137.
Meter change time	Enter the time when the meter was changed.
Meter change user	Enter the name of the user account that changed the meter.
End time	Enter the time when the old meter was replaced.

Continued

Property	Description
End value	Enter the value the old meter had when it was replaced.
Start time	Enter the time when the new meter was installed.
Start value	Enter the value of the new meter when it was installed.
Meter constant	Enter the constant of the new meter. If the meter counts in kilo (10^3), the constant is 1000.
Min value	Enter the first value of the new meter after roll-over.
Max value	Enter the last value of the new meter before roll-over.

7. Click **OK**.

15.6 Editing the Interval of an Interval Trend Log

You edit the interval property of a trend log to increase or decrease the frequency of records.

For more information, see section 15.3 “Interval Trend Logs ” on page 130.

To edit the interval of an interval trend log

1. In WorkStation, in the **System Tree** pane, click the interval trend log whose interval you want to edit.
2. In the **Interval** box, type the new value.
3. Click the **Save** button  .

15.7 Meter Function

The meter function adds meter properties to any trend log type to seamlessly handle consumption calculations independent of meter rollover or meter exchange.

You create and configure the meter function in trend logs using WorkStation.

For example, in the figure below, the meter function in the trend log records a meter the 1st of every month. In the middle of February, the meter rolls over to 00000. A chart with meter consumption calculation prints the consumption every month.

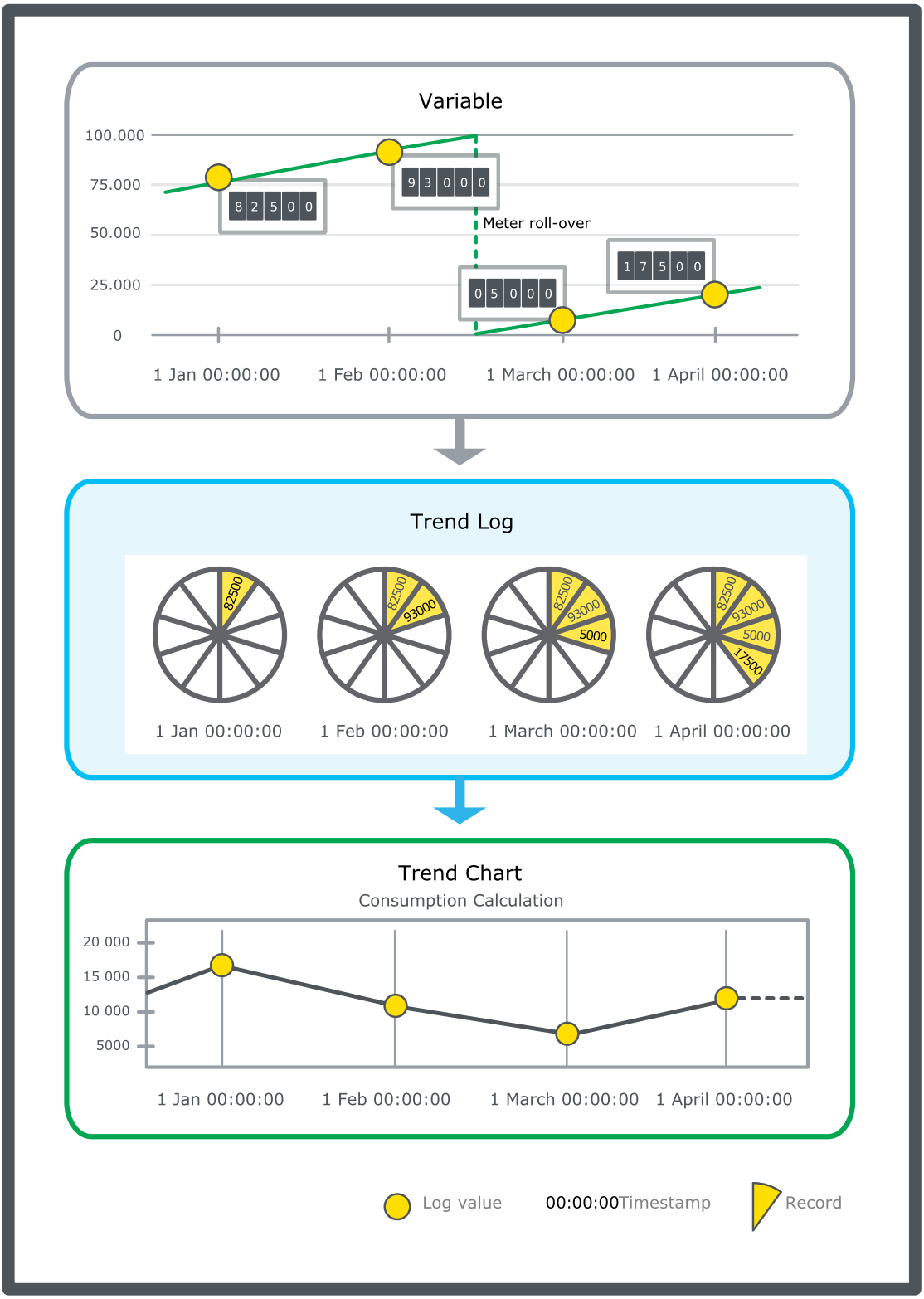


Figure – Meter trend log

The calculation function supports negative meter consumption values, which can be used to handle cases where you need to subtract consumption, for example, when energy is produced on site.

When physically replacing an old meter with a new one, you have to configure the meter function of the trend log by adding the configuration and values of both the old and the new meter. These configurations and values are the foundation when handling a meter rollover or calculating consumption though meter replacement. For more information, see section 15.8 “Managing Meter Replacement ” on page 139.

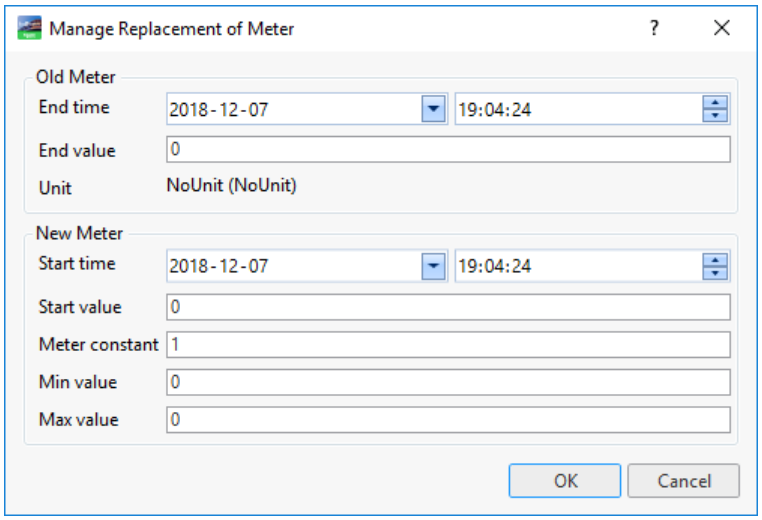


Figure – Manage replacement of meter dialog box where you enter the values of both the old and the new meter

NOTE:

- In order for a meter rollover to be managed correctly in the meter trend log and to ensure logging starts at the correct energy reading value, you enter previous meter and new meter information in the **Manage replacement of meter** dialog box. For more information, see section 15.8 “Managing Meter Replacement ” on page 139.

15.8 Managing Meter Replacement

You have to manage the meter configuration and values each time a meter is replaced.

For more information, see section 15.7 “Meter Function” on page 137.

To manage meter replacement

1. In WorkStation, in the **System Tree** pane, select the trend log whose meter configuration you want to manage.
2. On the **File** menu, click **Properties**.
3. In the **End time** box, enter the end time of the old meter.
4. In the **End value** box, type the value of the old meter when it was replaced.
5. In the **Start time** box, enter the start time of the new meter.
6. In the **Start value** box, type the current value of the new meter.

Continued on next page

7. In the **Meter constant** box, type the constant value of the new meter.

   IMPORTANT:
   - Type the constant of the new meter if unit conversion is not used in the trend log, for example, the old trend log counted in grams and the new one counts in kilos (10^3) type 1000.
   - If unit conversion is used in the trend log - do not change the meter constant.

8. In the **Min value** box, type the first value of the new meter when it rolls over.
9. In the **Max value** box, type the last value of the new meter before it rolls over.
10. Click **OK**.

15.9 Displaying Meter Change History

You view, through a trend log list, all meter change events that are registered by the meter trend log.

NOTE:
- The meter change history is only applicable for the meter trend log.

For more information, see section 15.7 “Meter Function” on page 137.

To display meter change history

1. In WorkStation, in the **System Tree** pane, select the trend log list that is connected to a meter trend log.
2. On the **Trend Log List** toolbar, click the **Show list of meter change events** button  .
3. Click **Close**.

It is important that all meter changes are registered in the **Manage replacement of meter** dialog box.

15.10 Extended Trend Logs

You use an extended trend log to store records from a trend log. An extended trend log can be connected to a trend log or connected in a series to another extended trend log. Only one extended trend log can be connected to a trend log or another extended trend log.

You create and configure extended trend logs from WorkStation.

IMPORTANT:
- The extended trend log cannot log a variable.
- The extended trend log gets the initial value of the connected trend log.

- Do not connect more than one extended trend log to a trend log or another extended trend log. If a trend log is connected to two or more extended trend logs, critical conflicts can occur.
- The extended trend log must have the same unit as the monitored trend log to correctly display values.

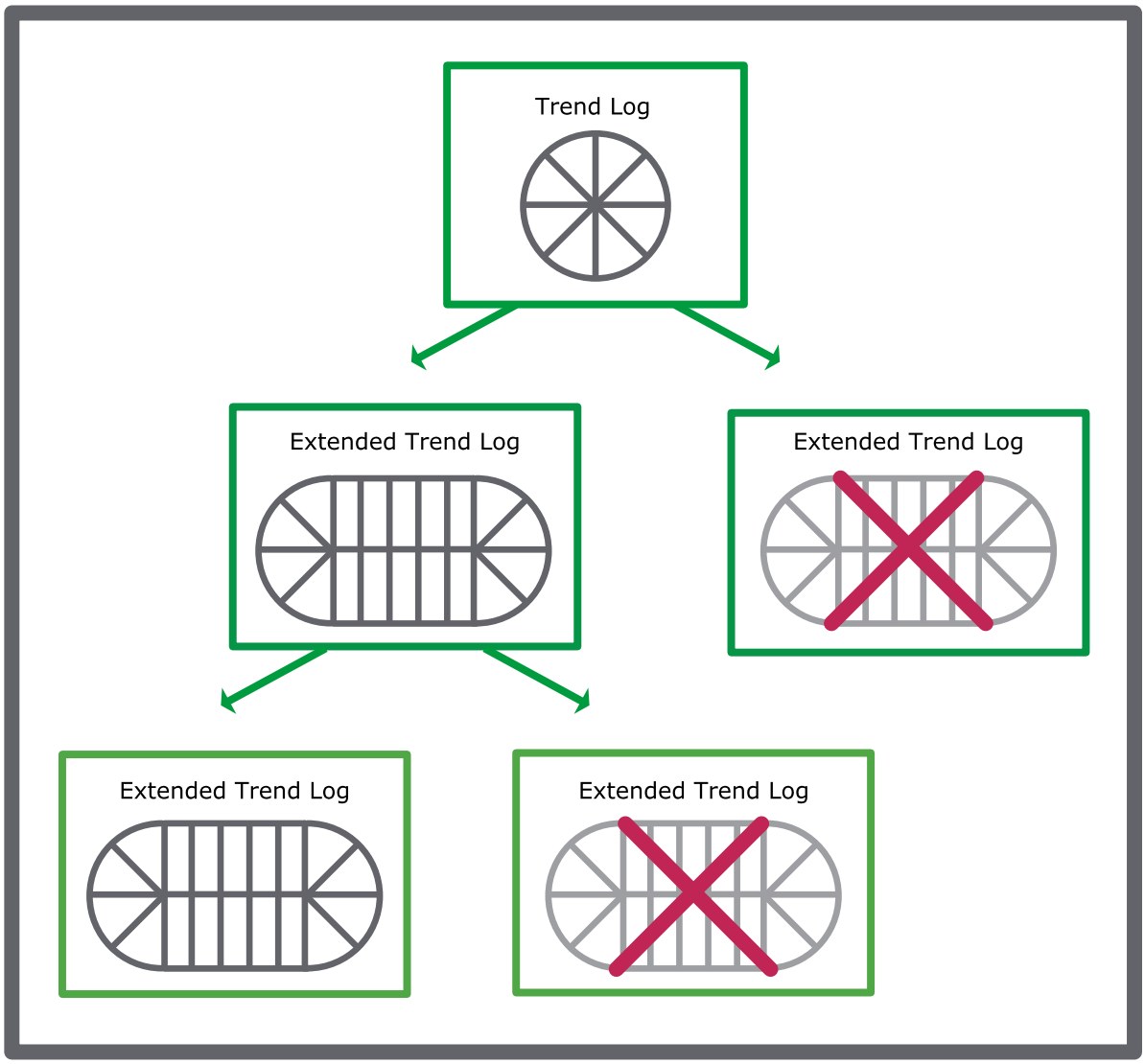


Figure – Do not connect more than one extended trend log to a trend log or extended trend log.

The extended trend log is often saved on an Enterprise Server or an Enterprise Central with more storage capacity than the automation server where the ordinary trend log is saved. This extra storage capacity enables the Enterprise Server or Enterprise Central to store more records before it overwrites old ones. The extended trend log can be viewed in a trend log list or a trend chart.

You can configure the extended trend log to transfer data several ways: Smart log, percentage, time interval, or force transfer.

Table – Extended Trend Log Transfer Criteria

Function	Explanation
Smart log	Automatically updates the transfer rate with respect to the frequency of records, network speed, and the capacity of the EcoStruxure BMS server that runs the trend log and the extended trend log.
Threshold	Transfers records every time a specific percentage threshold of records on the trend log is reached.
Maximum transfer interval	Transfers records at a specific time interval even though the threshold or Smart log condition is not reached.
Transfer trigger variable	Transfers records when triggered by a variable that changes state from false to true, for example, a digital schedule. The transfer takes place regardless of the transfer threshold. This function can be used to ensure that the extended trend log contains all records, for example, to generate a complete report at the end of every month.
Force transfer	Executed by the user to manually force a transfer even though transfer threshold is not reached.

When you create extend trend logs for BACnet or Xenta trend logs, be sure to create the extended trend log on the same EcoStruxure BMS server that hosts the BACnet or Xenta device and its trend log. This ensures that they remain synchronized in the event the server needs to be restored.

For more information, see the *Extended Logging for External BACnet Trend Logs Workflow* topic on WebHelp.

For more information, see the *Trend Logs for Xenta LonWorks Devices* topic on WebHelp.

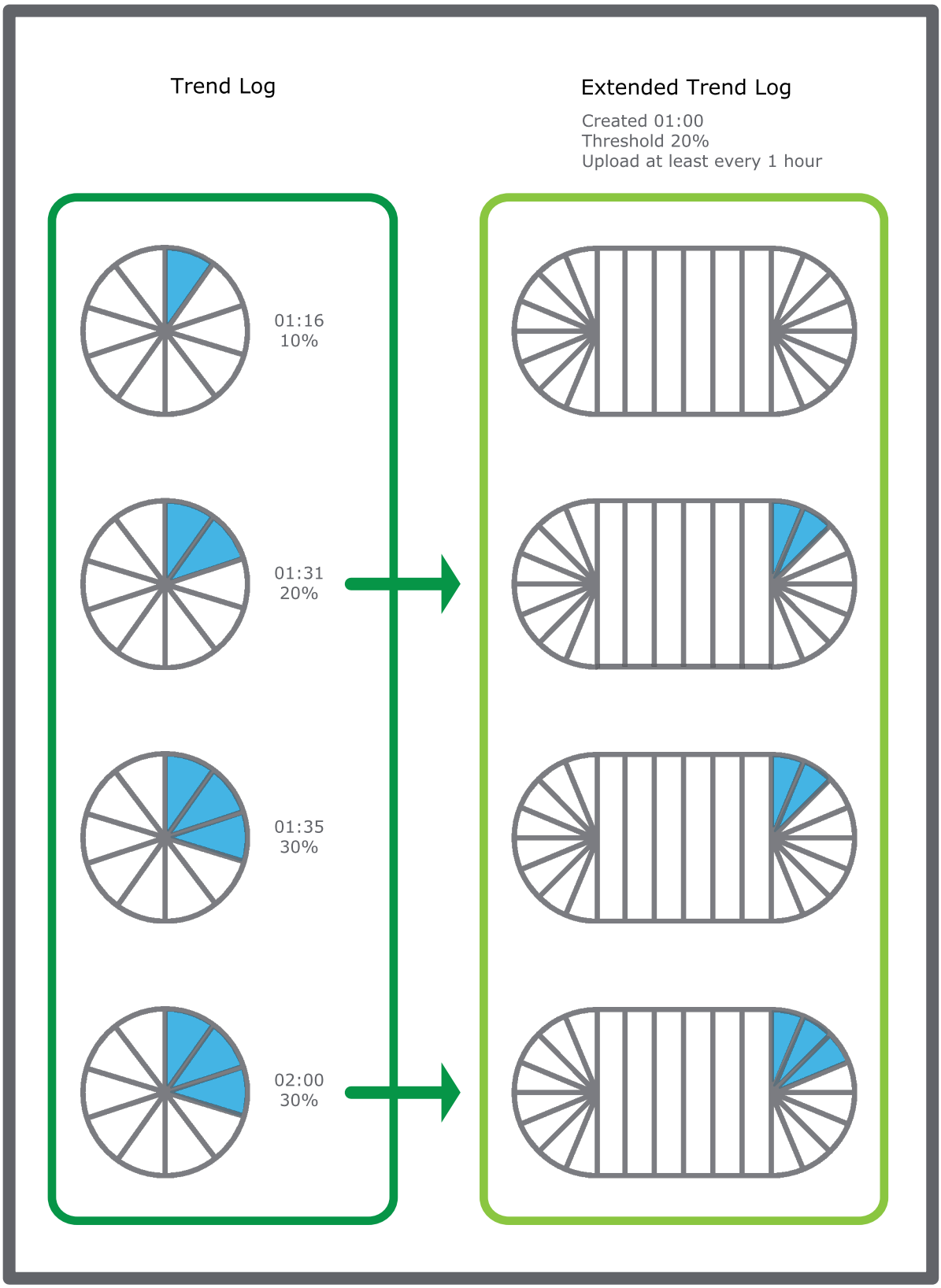


Figure – Extended trend log that transfers records from a trend log each time the trend log exceeds a record volume of 20% or every hour.

When you edit a record in the extended trend log, the changes do not affect the connected trend log. If you edit a record in the trend log, the changes are transferred to the extended trend log next time a transfer occurs. You can edit both the trend log and the corresponding record in the extended trend log, but the edit is written twice in the extended trend log record under certain circumstances:

- the record in the extended trend log is manually updated
- the corresponding edit is transferred from the trend log to the extended trend log

The trend log list or trend chart displays the last written value of an edited record.

Example 1: You edit a record in a trend log that is connected to an extended trend log. The extended trend log is updated with the edited record. After the transfer, you update the corresponding record in the extended trend log. The trend log list and trend chart connected to the extended trend log display the last value of the record, which in this case is the extended trend log edit.

Example 2: You edit a record in a trend log that is connected to an extended trend log. Before the extended trend log is updated with the edited record, you edit the corresponding record in the extended trend log. After a while the trend log transfers its edited record to the extended trend log. The trend log list and trend chart connected to the extended trend log display the edited trend log record value and not the edited extended trend log record value. In this case, the trend log list and trend chart display the last value that was written to the extended trend log, not the last edited value.

You can view all edits, automatically transferred or manually added, in the record history.

15.10.1 Archive Overview

Archiving is the process of preserving historical data, which is comprised of selected events and extended trend logs. For example, some facilities are required to maintain archives to comply with government regulations. Another example is in secure facilities where they must maintain records of who logged in or who changed setpoints. Archiving is not a backup function because archive data cannot be imported back into the system.

For more information, see the *Archiving Overview* topic on WebHelp.

15.10.2 Extended Trend Log Meter Support

You can view the meter properties of the connected trend log, if the meter function is enabled on the connected trend log. For more information, see section 15.7 “Meter Function” on page 137.

15.11 Configuring an Extended Trend Log

You configure the properties of an extended trend log to meet the unique needs of your site.

For more information, see section 15.10 “Extended Trend Logs” on page 140.

To configure an extended trend log

1. In WorkStation, in the **System Tree** pane, select the extended trend log you want to configure.
2. On the **File** menu, click **Properties**.
3. In the properties dialog box, click the **Basic** tab.
4. Edit the basic properties:

Component	Description
Monitored trend log	Enter the path to the trend log you want to transfer records from.
Unit	The unit of an extended trend log created from the trend log wizard at the same time as the connected trend log inherits the unit of measurement from the connected trend log. The unit of an extended trend log that is manually connected to a trend log needs to be manually configured to use the same unit of measurement as the connected trend log.
Smart log	Select **True** to optimize the transfer of the monitored trend log to the extended trend log.
Threshold	Select the percentage threshold at which the trend log transfers its records to the extended trend log.
Maximum transfer interval	Select the maximum length of time that can pass between transfers from the monitored trend log to the extended trend log.
Transfer trigger variable	Enter a trigger variable to force a transfer of all records from the trend log to the extended trend log, for example, to generate a complete report. For more information, see section 15.10 “Extended Trend Logs” on page 140.
Log size	Select the number of records to store before old records are overwritten, including internal records generated by the trend log. For more information, see section 15.12 “Log Record Storage” on page 146.
Include in reports	Select **True** to include the extended trend log data in reports.

5. Click the **Meter Info** tab.

6. View the meter properties:

Property	Description
Is meter log	Displays **True** if the trend log meter function is active. For more information, see section 15.7 “Meter Function” on page 137.
Meter change time	Displays the time when the meter was changed.
Meter change user	Displays the name of the user account that changed the meter.
End time	Displays the time when the old meter was replaced.
End value	Displays the value the old meter had when it was replaced.
Start time	Displays the time when the new meter was installed.
Start value	Displays the value of the new meter when it was installed.
Meter constant	Displays the constant of the new meter. If the meter counts in kilo (10^3), the constant is 1000.
Min value	Displays the first value of the new meter after roll-over.
Max value	Displays the last value of the new meter before roll-over.

NOTE: Meter properties are only available if the meter properties of the connected trend log are active.

7. Click **OK**.

15.12 Log Record Storage

All trend logs use circular storing. How many records a trend log can store before overwriting old ones depends on the trend log configuration.

For example, a trend log is configured to store 10 records. The logging starts and the first record x1 is stored. After 10 records the trend log is full. The next record x11 overwrites the oldest record which in our case is x1. The next logging x12 overwrites the oldest record x2, and so on.

Additional internal records can be generated by the log itself. These records may not be visible. Internal records are a part of the log usage.

If you try to configure a trend log to store a larger number of log records than the EcoStruxure BMS server can manage, the trend log is not created.

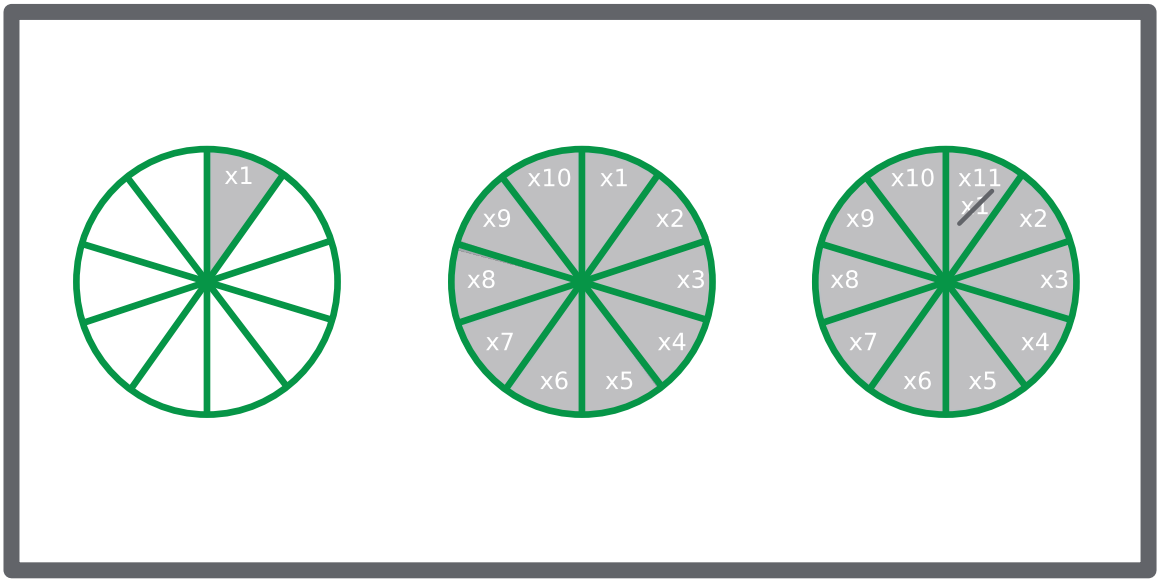


Figure – Circular storing, schematic

15.13 Editing the Log Size for a Trend Log

You increase or decrease the number of records to be stored in the trend log before records are overwritten.

For more information, see section 15.12 “Log Record Storage” on page 146.

To edit the log size for a trend log

1. In WorkStation, in the **System Tree** pane, click the trend log whose log size you want to edit.
2. In the **Extended Trend Log** properties, in the **Log size** box, enter the new value.
3. Click the **Save** button .

15.14 Manually Adding a Trend Log Record to a Trend Log

You manually add trend log records if a log record has been missed and you want to complete the log or to add old values to compare the log record history to.

For more information, see section 15.2 “Trend Logs” on page 129.

To manually add a trend log record to a trend log

1. In WorkStation, in the **System Tree** pane, select the folder or EcoStruxure BMS server where the trend log is located.
2. Select the trend log to which you want add a record.
3. On the **Actions** menu, point to **Modification** and then click **Add trend log record**.

Continued on next page

4. In the **Add trend log record** dialog box, in the **Time stamp** box, enter the date and time of the new value.
5. In the **Value** box, enter the value.
6. In the **Comment** box, type a comment.
7. Click **Add record**.
8. Click **Close**.

The record is now added to the trend log.

15.15 Importing Log Data to a Trend Log

You import trend log data to move trend log data between systems.

For more information, see section 15.1 “How Trend Logs Work” on page 127.

To import log data to a trend log

1. In WorkStation, in the **System Tree** pane, select the trend log to which you want to import log records.
2. On the **Actions** menu, point to **Modification** and then click **Import log data**.
3. Select the .XML file you want to import.
4. Click **Open**.

The imported log data is displayed in the trend log list view of the trend log.

16 Schedules

What's in This Chapter?

16.1 How Schedules Work

Schedules are used to schedule the operation of part of the building management system, such as a fan, a door, or a setpoint. Using a schedule, a fan can be set to operate between 08:00 and 17:00 every workday.

Schedules can be overridden by different types of exceptions. For example, if you want to shut the fan down the last Friday in every month due to maintenance, you can use a calculated exception. The exception is added to the schedule and turns off the fan the last Friday in every month.

If you want to shut down the fan during the summer vacation, you can use a Calendar exception. In this case, you use an already created calendar that defines the summer vacation. This calendar is added to the schedule as an exception and the fan will be shut down during all days of the summer vacation defined by the calendar.

16.1.1 Schedule Editor in WorkStation

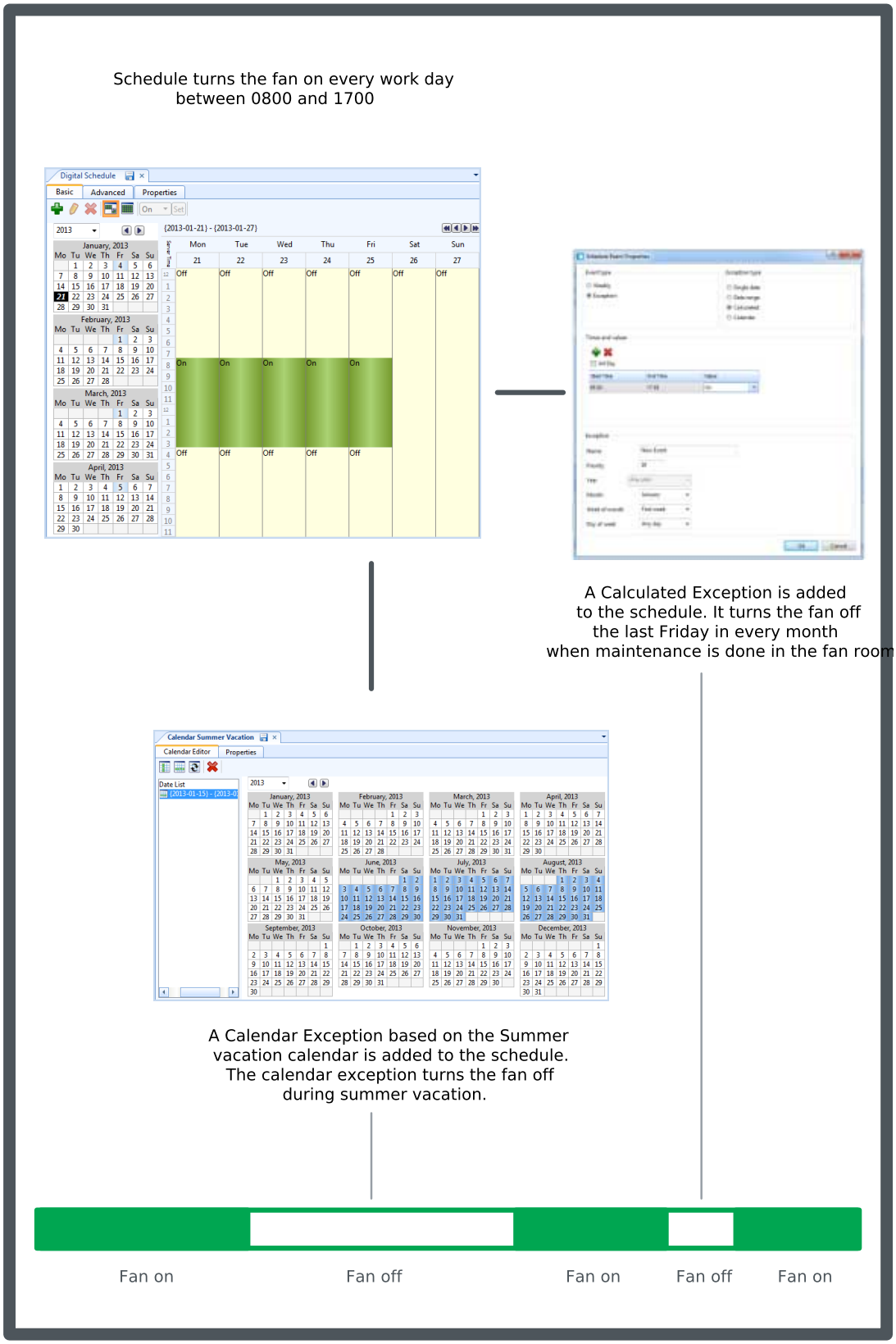


Figure – Schedule editor calendar exceptions

The Basic view of the Schedule Editor serves as a workspace to plan and design a schedule. You use this editor to create, manage, and display weekly scheduled events and exception events.

For more information, see section 16.2 “Basic View of the Schedule Editor” on page 152.

16.1.2 Schedule Editor in WebStation

The Schedule Editor serves as a workspace to plan and design a schedule. You use this editor to create, manage, and display weekly scheduled events and exception events.

For more information, see the *Schedule Editor in WebStation* topic on WebHelp.

16.1.3 Schedule Colors in WorkStation

A schedule has a color code so you can identify weekly events and exception events at a glance. This color code can assist you when you are modifying your schedule or trying to troubleshoot any problems.

For more information, see section 16.3 “Schedule Colors in WorkStation” on page 153.

16.1.4 Schedule Colors in WebStation

A schedule has a color code so you can identify weekly events and exception events at a glance. This color code can assist you when you are modifying your schedule or trying to troubleshoot any problems.

For more information, see the *Schedule Colors in WebStation* topic on WebHelp.

16.1.5 Schedule Navigation in WorkStation

You can navigate in a schedule day-by-day, month-by-month, or year-by-year.

For more information, see section 16.5 “Schedule Navigation in WorkStation” on page 156.

16.1.6 Schedule Navigation in WebStation

You can navigate in a schedule day-by-day, month-by-month, or year-by-year.

For more information, see the *Schedule Workspace Toolbar* topic on WebHelp.

16.1.7 Schedule Events

Scheduled events are used to control different types of devices, for example lights, fans or doors.

For more information, see section 16.9 “Schedule Events” on page 158.

16.1.8 Calendars in WorkStation

A calendar is a list of dates. The calendar provides the schedule with the dates when the exception events shall occur. To save time, you can reference a single calendar rather than entering several exception events in a schedule.

For more information, see section 18.1 “Calendars in WorkStation” on page 177.

16.1.9 Calendars in WebStation

A calendar is a list of dates. The calendar provides the schedule with the dates when the exception events shall occur. To save time, you can reference a single calendar rather than entering several exception events in a schedule.

For more information, see the *Calendars in WebStation* topic on WebHelp.

16.1.10 Schedules Types

You can create three types of schedules: Digital, Multistate, or Analog. You create a digital schedule if the schedule needs to control a device with two output states, such as On or Off. You create a multistate schedule if the schedule needs to control a device that has output states based on multiple states, such as low, medium, or high. You create an analog schedule if the schedule controls a device that gauges the output in real numbers.

For more information, see section 16.16 “Schedule Types ” on page 162.

16.1.11 Xenta Schedules in WebStation

Xenta Time Schedules and Xenta Central Time Schedules can be edited in WebStation. You can add, edit and delete weekly and exception events. You can assign and unassign lead Xenta central schedules. The Xenta Time Schedules and Xenta Central Time Schedules must be created using WorkStation.

For more information, see the *Xenta Schedules in WebStation* topic on WebHelp.

16.1.12 Multi Schedule Viewer in WebStation

You can create a Multi schedule viewer in WebStation to edit and view a number of schedules at the same time.

For more information, see the *Multi Schedule Viewer* topic on WebHelp.

16.2 Basic View of the Schedule Editor

The Basic view of the Schedule Editor serves as a workspace to plan and design a schedule. You use this editor to create, manage, and display weekly scheduled events and exception events.

You can also display the client time zone and the server time zone in the Basic view. This is convenient if your EcoStruxure BMS server is located in a time zone that is different from the time zone where you are configuring the schedule. For more information, see the *Time Zones* topic on WebHelp.

The following figure displays the schedule of the lights within the building. The weekly events are in green and the exception event in blue. The values of the events are also displayed. Monday, November 12 is an exception event so it does not follow the same scheduled events as the rest of the week. The lights are off all day. For the rest of the week, the lights turn on at 07:00 and turn off at 18:00.

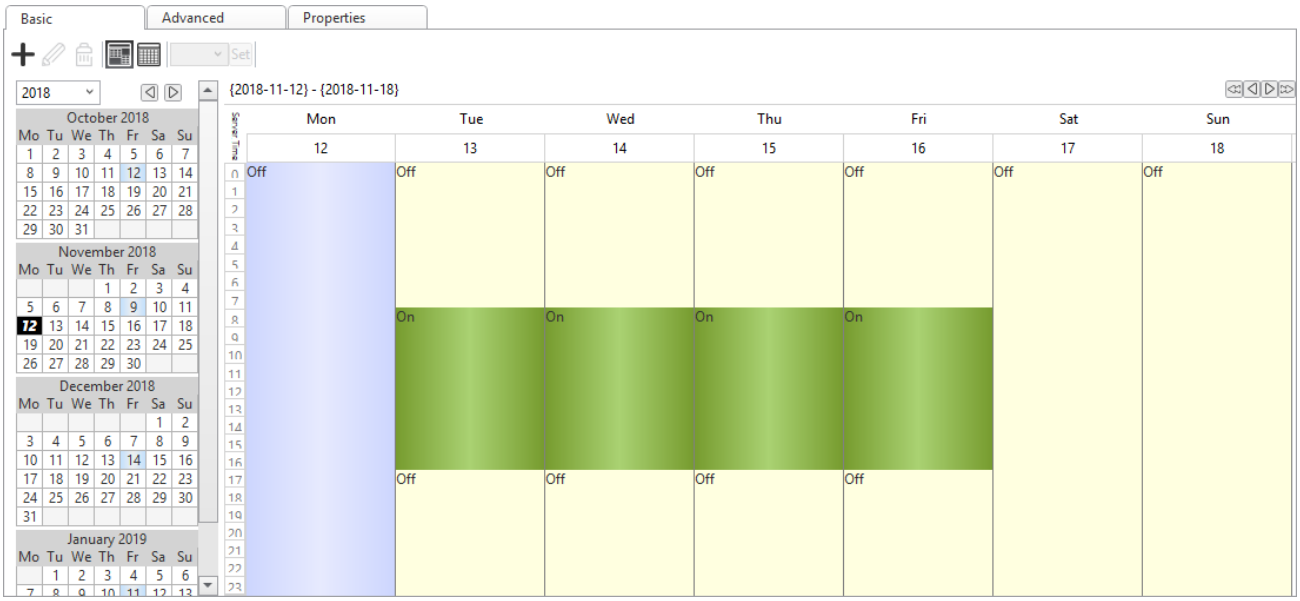


Figure – Basic view of the Schedule Editor

16.3 Schedule Colors in WorkStation

A schedule has a color code so you can identify weekly events and exception events at a glance. This color code can assist you when you are modifying your schedule or trying to troubleshoot any problems.

16.3.1 Basic Schedule View

In the Event grid, weekly events and exception events display in distinct colors to clearly identify them. Similar events that are next to each other are highlighted in different shades of the same color so you can easily see the start and stop time. For example, a meeting scheduled from 8:00 to 12:00 is dark green while the weekday event from 12:00 to 17:00 is in light green. In the Calendar view, you can view the weekly events and exception events across several months and the selected day in black.

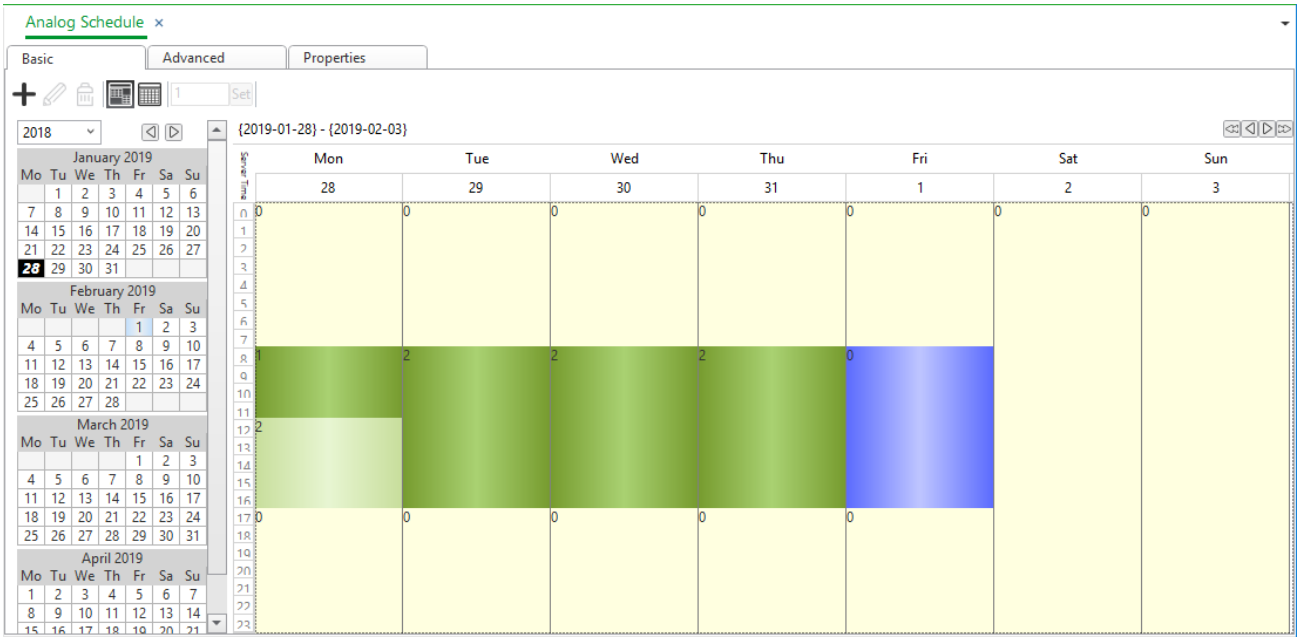


Figure – Basic Schedule Editor colors

Table – Basic Schedule Editor Colors

Color	Description
Cream	Event grid: default value
Green	Event grid: weekly events
Blue	Event grid: exception events
Light blue	Calendar view: exception events
Black	Calendar view: selected day

Priority Level Conflicts

The Event grid also highlights a conflict in dark blue if there are two exception events that overlap on the same day and have different values, but are set at the same priority level.

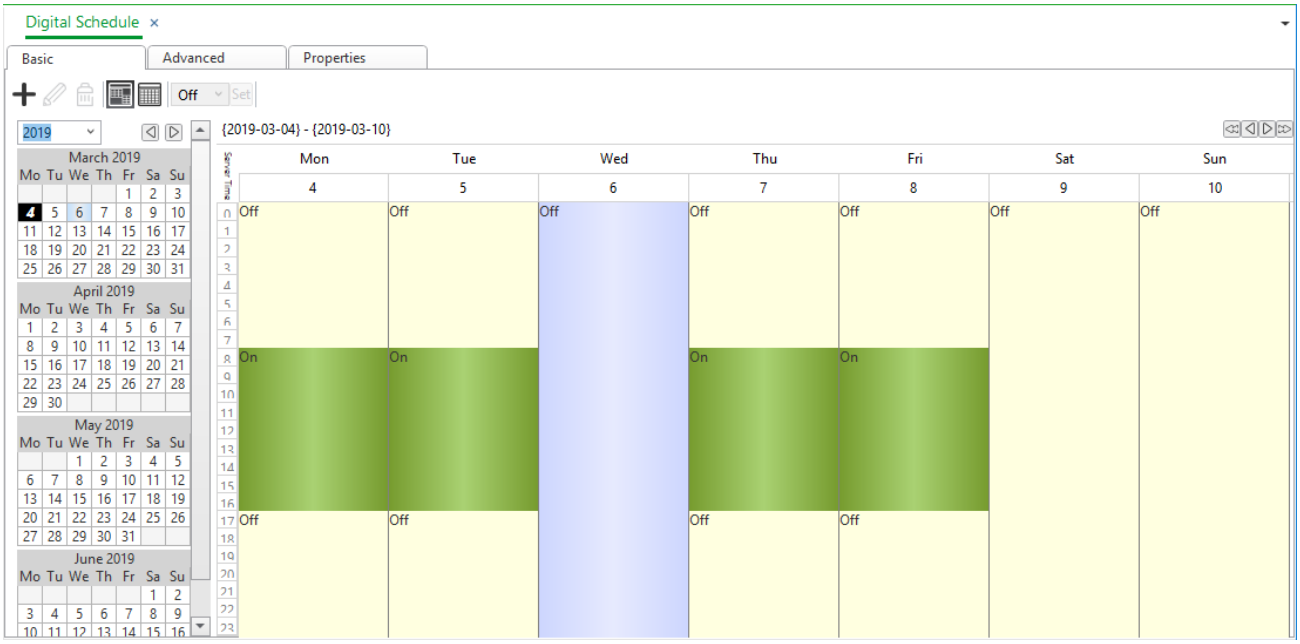


Figure – Priority level conflict

For more information, see the *Priorities* topic on WebHelp.

16.3.2 Advanced Schedule View

In the Event gride, weekly and exception events are both green in the Advanced Schedule. Events that are next to each other in the schedule are presented in different intensities of green so you can easily see the start and stop time of these events. In the Calendar view, you can view the exception events presented in light blue. The selected event is presented in a darker blue.

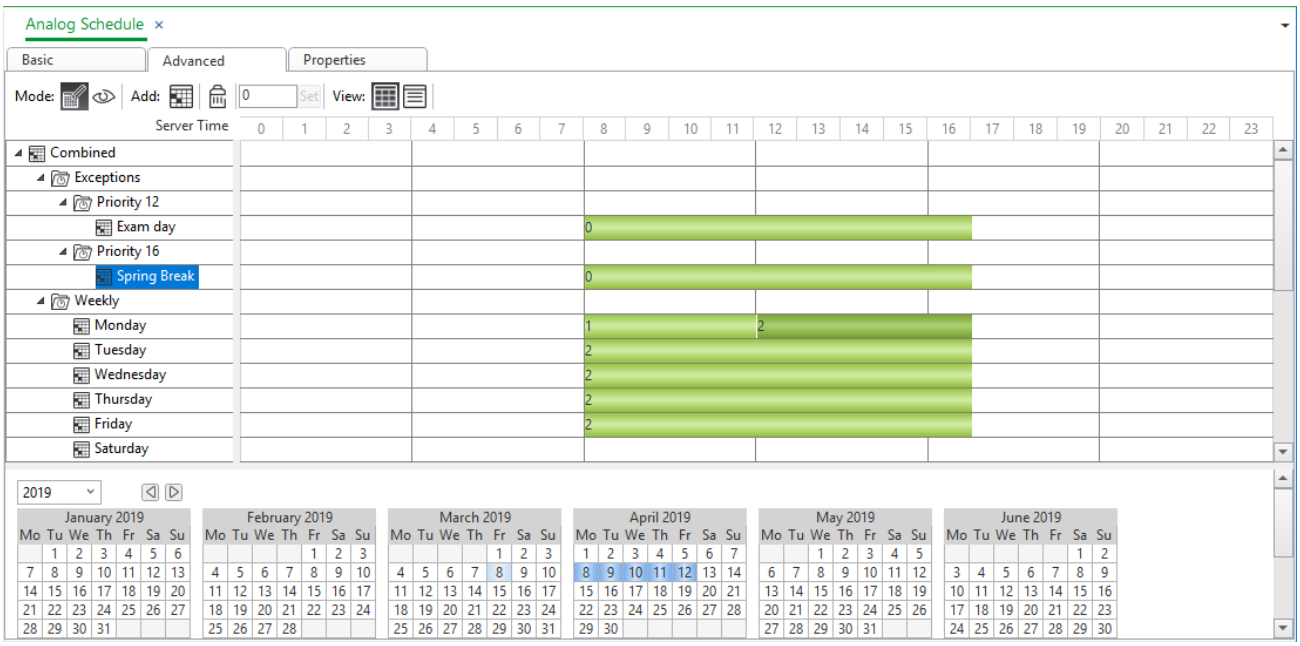


Figure – Advanced Schedule Editor colors

Table – Advanced Schedule Editor Colors

Color	Description
White	Event grid: default value
Green	Event grid: weekly and exception events
Light blue	Calendar view: exception events
Blue	Calendar view: selected exception event

16.4 Viewing a Schedule

You view a schedule using Basic Schedule Editor.

For more information, see section 16.2 “Basic View of the Schedule Editor” on page 152.

To view a schedule

1. In WorkStation, click on the schedule.

The schedule is displayed in Basic Schedule Editor.

16.5 Schedule Navigation in WorkStation

You have some navigation tools to use when you navigate the Basic Schedule Editor, the Advanced Schedule Editor, and the Calendar Editor. To navigate the editors, you can use the tools described in the following table.

Table – Schedule and Calendar Editor Navigation Tools

Tool	Description
	**Year** Enter the year you want to display in the schedule calendar. For more information, see section 16.1 “How Schedules Work” on page 149. Navigation arrows to move ahead or backward one month
	**Back One Month** Click to step a month back in the schedule calendar. For more information, see section 16.1 “How Schedules Work” on page 149.
	**Forward One Month** Click to step a month forward in the schedule calendar. For more information, see section 16.1 “How Schedules Work” on page 149.
	**Back a Week** Click to step a week back in the schedule week view. Only avaialbe in the Basic Schedule Editor. For more information, see section 16.2 “Basic View of the Schedule Editor” on page 152.

Continued

Tool	Description
	**Back a Day** Click to step a day back in the schedule week view. Only avaialbe in the Basic Schedule Editor. For more information, see section 16.2 “Basic View of the Schedule Editor” on page 152.
	**Forward a Day** Click to step a day forward in the schedule week view. Only avaialbe in the Basic Schedule Editor. For more information, see section 16.2 “Basic View of the Schedule Editor” on page 152.
	**Forward a Week** Click to step a week forward in the schedule week view. Only avaialbe in the Basic Schedule Editor. For more information, see section 16.2 “Basic View of the Schedule Editor” on page 152.

16.6 Scrolling a Day in a Schedule

You scroll a day in a schedule using the Forward a Day and Back a Day buttons.

For more information, see section 16.5 “Schedule Navigation in WorkStation” on page 156.

To scroll a day in a schedule

1. Click the **View all schedule events** button  .
2. Click the **Forward a Day** button  or click the **Back a Day** button  .

16.7 Scrolling a Week in a Schedule

You scroll a week in a schedule using the Forward a Week and Back a Week buttons.

For more information, see section 16.5 “Schedule Navigation in WorkStation” on page 156.

To scroll a week in a schedule

1. Click the **View all schedule events** button  .
2. Click the **Forward a Week** button  or click the **Back a Week** button  .

16.8 Editing the Grid Time Interval

You edit the grid time interval for the shedule view to define how precis you can be when editing the time span of a schedule event using the drag and drop method.

For more information, see the *Advanced View of the Schedule Editor* topic on WebHelp.

To change the grid time interval

1. In WorkStation, in the **System Tree** pane, select the schedule for which you want to change the grid time interval.
2. Click the **Advanced** tab.
3. Right-click the **Server Time** bar, point to **Snap To**, and then select a time interval for the grid.

16.9 Schedule Events

A schedule has two types of events: weekly events and exception events. Weekly events occur every week at specified times. Exception events occur when the schedule deviates from the weekly schedule, such as during holidays. Exception events override the weekly events when there is an overlap.

For each schedule except Xenta schedules, you can set a default value. The default value goes into effect after the exception events and weekly events are complete or relinquish control. For example, the weekly event for a fan ends at 17:00. The fan ran at a value of 3 (high) throughout the event. There are no scheduled events after the weekly event. Because you have assigned 0 as the default value, the fan adjusts to the default value and turns to 0 (off). The value remains at 0 until the next scheduled event.

Events occur in the following order of precedence:

- Exception events
- Weekly events
- Default value

Xenta schedules do not have any default values.

Example:

The weekly event for a fan is set to '08:00 - 17:00'. An exception event is set to '17:00 - 20:00' for a specific date. The exception event overrides the weekly event so that the fan only runs from 17:00 to 20:00 on the specified date.

Xenta schedule events occur in the following order of precedence:

- Exception events
- Weekly events

16.9.1 Weekly Events in WorkStation

A weekly event occurs every week for an extended period of time on a regular basis. You can schedule more than one weekly event for each day of the week.

For more information, see section 16.10 “Weekly Events in WorkStation” on page 159.

16.9.2 Weekly Events in WebStation

A weekly event occurs every week for an extended period of time on a regular basis. You can schedule more than one weekly event for each day of the week.

For more information, see the *Weekly Events in WebStation* topic on WebHelp.

16.9.3 Exception Events in WorkStation

An exception event occurs instead of the scheduled weekly events for a single date, date range, calculated date, or calendar reference.

For more information, see section 17.1 “Exception Events in WorkStation” on page 167.

16.9.4 Exception Events in WebStation

An exception event occurs instead of the scheduled weekly events for a single date, date range, calculated date, or calendar reference.

For more information, see the *Exception Events in WebStation* topic on WebHelp.

16.9.5 Priorities

Priority is a number that corresponds to a preassigned level of importance. When used in schedules, priority numbers range from one to sixteen. One is the most important or highest priority and sixteen is the lowest priority.

For more information, see the *Priorities* topic on WebHelp.

16.9.6 Time Zones

When you create a schedule, the time zone of the EcoStruxure BMS server that contains the schedule determines the execution of the events. If the schedule is copied to an EcoStruxure BMS server in a different time zone, the specified dates and times relate to the new time zone.

For more information, see the *Time Zones* topic on WebHelp.

16.10 Weekly Events in WorkStation

A weekly event occurs every week for an extended period of time on a regular basis. You can schedule more than one weekly event for each day of the week.

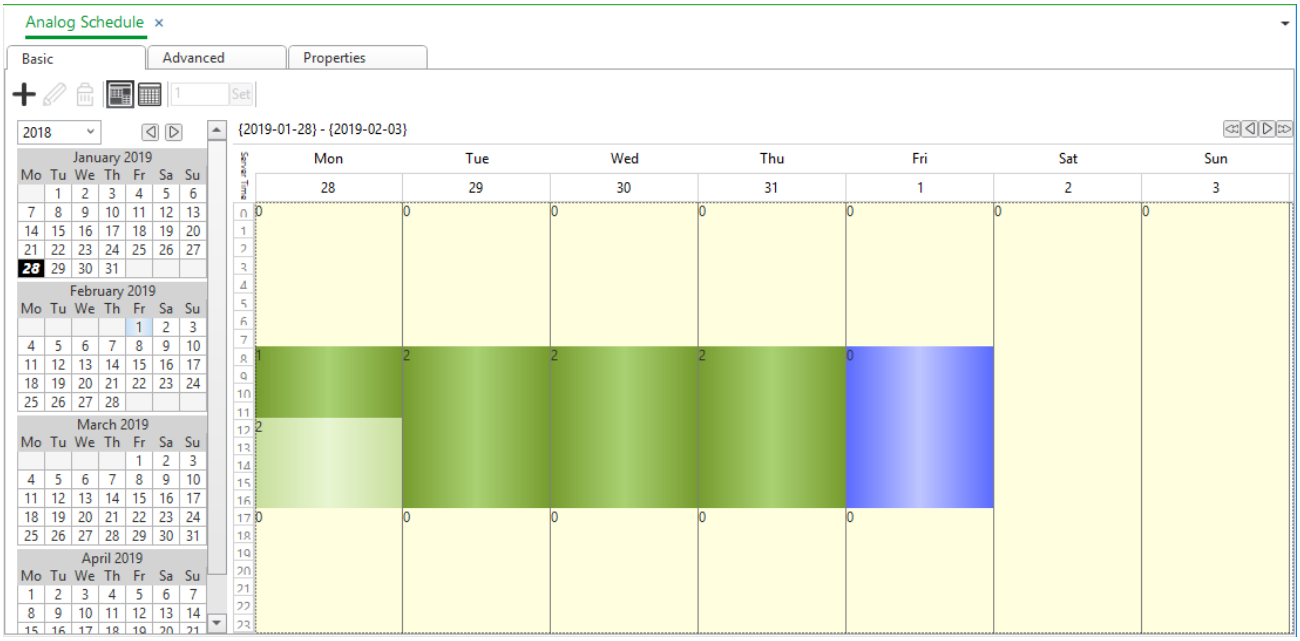


Figure – Weekly events in an EcpStruxure Building Operation schedule

If there are any non-routine events, such as holidays, you can use exception events to override the schedule. For more information, see section 17.1 “Exception Events in WorkStation” on page 167.

16.11 Viewing a Schedule Event

You view schedule events to see the schedule for one or more events.

For more information, see section 16.9 “Schedule Events” on page 158.

To view a schedule events

1. In WorkStation, in the **System Tree** pane, select the schedule you want to view.
2. Click the **Basic** tab.
3. On the Schedule toolbar, click the **View All Schedule Events** button .

16.12 Editing the Time for a Weekly Event

You change the time for a weekly schedule event using the Basic Schedule Editor.

For more information, see section 16.10 “Weekly Events in WorkStation” on page 159.

To edit the time for a weekly event

1. In WorkStation, in the **System Tree** pane, click the schedule with the event you want to change.
2. In Basic Schedule Editor, click the **View weekly schedule events** button .

Continued on next page

3. Click the schedule events you want to change the time for.
4. Click on the events node to extend or reduce the time for the schedule.
5. On the **File** menu, click **Save**.

16.13 Adding a Weekly Event

You add weekly events to a schedule to determine when the event is to regularly occur. Weekly events always occur regularly unless overridden by an exception event.

For more information, see section 16.10 “Weekly Events in WorkStation” on page 159.

To add a weekly event

1. In WorkStation, in the **System Tree** pane, select the schedule you want to add the weekly event to.
2. Click the **Basic** tab.
3. On the **Basic Schedule Editor** toolbar, click the **View weekly schedule events** button  .
4. In the grid, click the start time. Drag the cursor vertically to select the end time and then horizontally to select all days for which the event should be valid.
5. On the **File** menu, click **Save**.

16.14 Editing a Weekly Event

You edit a weekly event to change the information about a weekly event on a single day.

To edit a weekly event

1. In WorkStation, in the **System Tree** pane, select the schedule you want to edit.
2. In the Work area, click the **Basic** view.
3. In the Event grid, select the weekly event you want to edit.
4. On the **Basic** toolbar, click the **Edit schedule event** button  .
5. In the **Schedule event properties** dialog box, edit the properties.

Component	Description
Event type	Click **Weekly** to select a weekly event type.
Days of week	Select the days of the week that apply to this schedule.
All Day	Select to create an all day event.

Continued on next page

Continued

Component	Description
+	Click to add a line to the **Times and values** box.
🗑	Click to delete an entry from the **Times and values** box.

6. Click **Ok**.

16.15 Deleting a Schedule Event

You delete a weekly or exception event from a schedule when the event is not in use.

For more information, see section 16.9 “Schedule Events” on page 158.

To delete a schedule event

1. In WorkStation, in the **System Tree** pane, select the schedule you want to delete the schedule event from.
2. In the Work area, click the **Basic** view.
3. Select the weekly event or exception event you want to delete.
4. On the **Basic** toolbar, click the **Delete** button 🗑.
5. On the **File** menu, click **Save**.

16.16 Schedule Types

You can create three types of schedules: Digital, Multistate, or Analog. You create a digital schedule if the schedule needs to control a device with two output states, such as On or Off. You create a multistate schedule if the schedule needs to control a device that has output states based on multiple states, such as low, medium, or high. You create an analog schedule if the schedule controls a device that gauges the output in real numbers.

You create schedules using WorkStation.

16.16.1 Analog Schedules

An analog schedule controls a device that gauges the output in real numbers. The real numbers include positive or negative numbers, fractions, and decimal values.

For more information, see section 16.19 “Analog Schedules” on page 164.

16.16.2 Digital Schedules

A digital schedule controls a device that has an on output state and an off output state.

For more information, see section 16.17 “Digital Schedules” on page 163.

16.16.3 Multistate Schedules

A multistate schedule controls a device that has output states based on integers or positive whole numbers including zero.

For more information, see section 16.21 “Multistate Schedules” on page 165.

16.17 Digital Schedules

A digital schedule controls a device that has an on output state and an off output state.

For example, you can create a digital weekly schedule that is bound to a digital output, such as a light switch. To turn on the lights Monday through Friday from 08:00 to 17:00, you can set the value to On when the schedule is active and Off when the schedule is inactive.

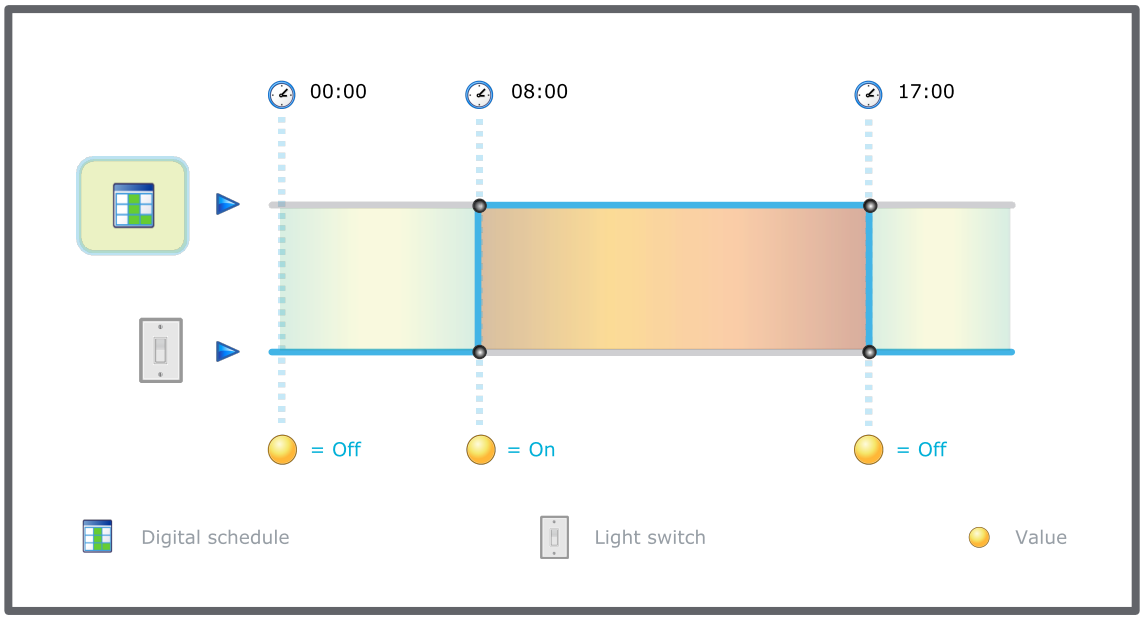


Figure – Digital Schedule

16.18 Editing the Status for a Weekly Event in a Digital Schedule

You change the status in a digital schedule event using Basic Schedule Editor.

For more information, see section 16.10 “Weekly Events in WorkStation” on page 159.

To edit the status for a weekly event in a digital schedule

1. In WorkStation, click the schedule with the event you want to change.
2. In **Basic Schedule Editor**, click the **View weekly schedule events** button .
3. Click the schedule events you want to change.

Continued on next page

4. On the **Basic Schedule Editor** toolbar, change the status in the box.
5. Click **Set**.
6. On the **File** menu, click **Save**.

16.19 Analog Schedules

An analog schedule controls a device that gauges the output in real numbers. The real numbers include positive or negative numbers, fractions, and decimal values.

For example, you can create an analog schedule to regulate a thermostat setpoint in an office area. To control the temperature from 08:00 to 17:00, you can set the value to 22 °C (72 °F) when the schedule is active and 16 °C (62 °F) when the schedule is inactive.

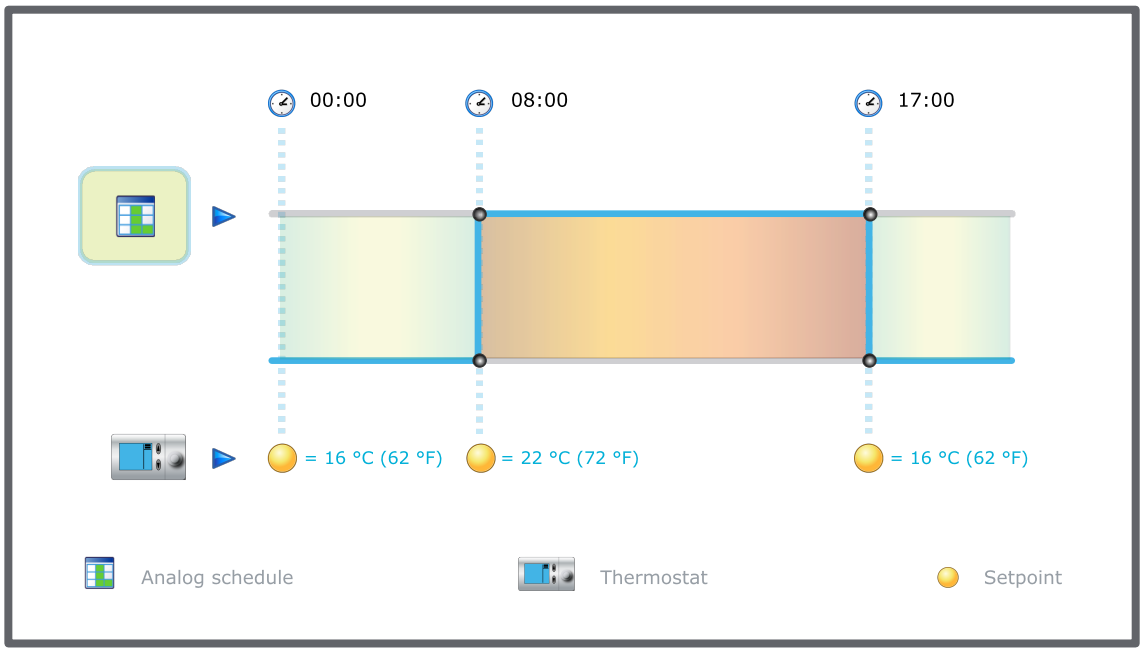


Figure – Analog Schedule

16.20 Editing the Value for a Weekly Event in an Analog Schedule

You change the value in an analog schedule event using Basic Schedule Editor.

For more information, see section 16.19 “Analog Schedules” on page 164.

To edit the value for a weekly event in an analog schedule

1. In WorkStation, click the schedule with the event you want to change.
2. In **Basic Schedule Editor**, click the **View weekly schedule events** button .
3. Click the schedule events.
4. On the **Basic Schedule Editor** toolbar, enter the new value in the box.

Continued on next page

5. Click **Set**.
6. On the **File** menu, click **Save**.

16.21 Multistate Schedules

A multistate schedule controls a device that has output states based on integers or positive whole numbers including zero.

For example, you can create a multistate weekly schedule that is bound to a multistate value to control an air handler unit in an office building. To regulate the air circulation Monday through Friday from 08:00 to 17:00, you can set the value to 2 (occupied) when the schedule is active and 1 (unoccupied) when the schedule is inactive.

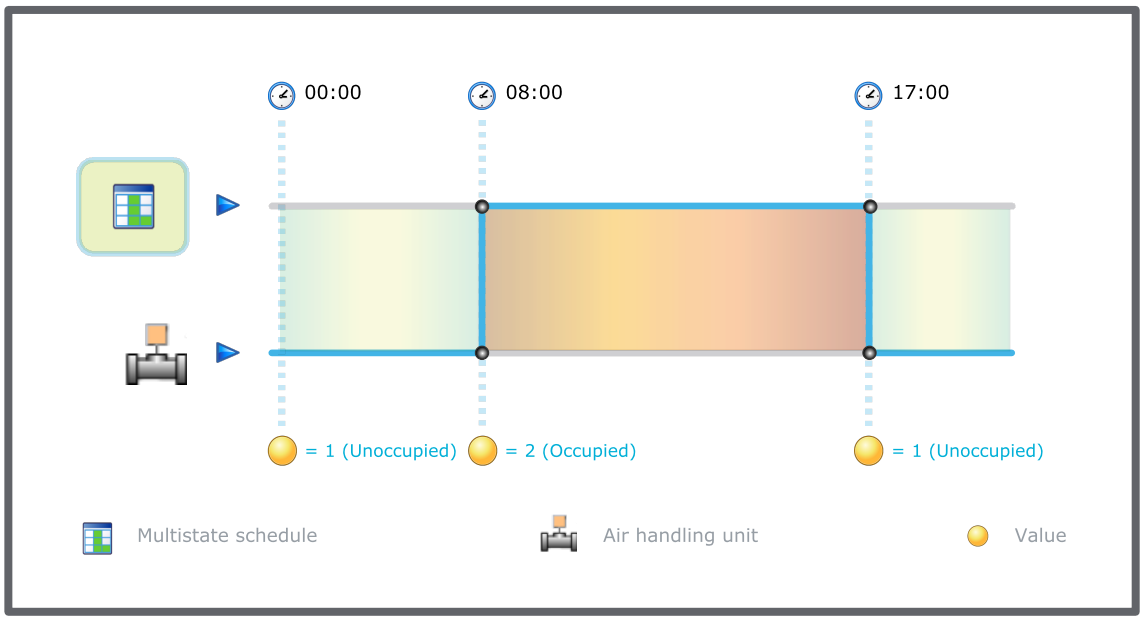


Figure – Multistate Schedule

16.22 Editing the State for a Weekly Event in a Multistate Schedule

You change the state in a multistate schedule event using Basic Schedule Editor.

For more information, see section 16.21 “Multistate Schedules” on page 165.

To edit the state for a weekly event in a multistate schedule

1. In WorkStation, click the schedule with the event you want to change.
2. In **Basic Schedule Editor**, click the **View weekly schedule events** button .
3. Click the schedule events you want to change.
4. On the **Basic Schedule Editor** toolbar, enter the new value in the box.

Continued on next page

5. Click **Set**.
6. On the **File** menu, click **Save**.

16.23 Saving a Schedule

You save a schedule when you want to keep your scheduled weekly events or exception events.

To save a schedule

1. In WorkStation, in the **System Tree** pane, select the schedule you want to save.
2. In the Work area, click the **Basic** view.
3. On the toolbar, click the **Save** button  .

17 Schedules Exception Events

What's in This Chapter?

17.1 Exception Events in WorkStation

An exception event occurs instead of the scheduled weekly events for a single date, date range, calculated date, or calendar reference.

For example, you create an exception event in March for an intense aerobics class in the gym to open an air vent to 100 % from 06:30 to 17:00 every Wednesday in March. This exception event takes precedence over the regularly scheduled weekly Wednesday events.

When scheduling exception events, you can use four exception types to provide flexibility and control in your schedule.

17.1.1 Date Exception Events

A single date exception event can occur on a single day, or you can use the options for the event to occur on more than one day. The options such as **Any year** and **Any day** provide flexibility. To schedule a single date event to take place every year on October 31, you select the following single date options:

- Year: Any year
- Month: October
- Day of month: 31
- Day of week: Any day

17.1.2 Date Range Exception Events

A date range exception event is an event that lasts over a period of time. In addition to a specific day of month, you can select **Odd, Even**, or **Any month**, and **Any day** or **Last day**, to provide the flexibility to a date range. For example, to schedule an exception event to occur annually from the last day of March to the last day of April, select the following options for the start and end dates:

Start Date

- Start year: Any year
- Start month: March
- Day of month: Last day
- Day of week: Any day

End Date

- Year: Any year
- Month: April
- Day of month: Last day
- Day of week: Any day

17.1.3 Calculated Exception Events

A calculated date is an exception event that recurs. Other than a specific month and week, you can select **Any month** and **Any week** or **Last week**, to provide flexibility to a calculated date. For example, to schedule the Monday of the first week of every month for an exception event, select the following options:

- Month: Any month
- Week of month: First week
- Day of week: Monday

17.1.4 Calendar Exception Events

A calendar reference allows you to apply an exception event for all dates specified in the calendar. For example, to schedule exception events for all holidays on a calendar, you select the calendar you want to reference and the schedule will follow the holidays created in the calendar.

17.2 Adding a Date Exception Event

You add a single date exception event to make an exception for a specific day in the schedule, such as 10 December, 2013.

For more information, see section 17.1 “Exception Events in WorkStation” on page 167.

To add a date exception event

1. In WorkStation, in the **System Tree** pane, select the schedule you want to add the single date exception event to.
2. Click the **Basic** tab.
3. On the **Basic Schedule Editor** toolbar, click the **New schedule event** button  .

Continued on next page

4. Click **Exception**.
5. In **Schedule Event Properties** dialog box, in the **Exception type** box, click **Single date**.
6. Select **All Day** if the exception event is to be on or off all day.
7. In the **Start Time** column, type a start time for the exception event.
8. In the **End Time** column, type an end time for the exception event.
9. In the **Value** column, select a value for the exception event.
10. In the **Name** box, type a name for the exception event.
11. In the **Priority** box, select a priority for the exception event to make it override conflicting events with lower priorities.
12. In the **Year** box, select the year for the single date.
13. In the **Month** box, select the month for the single date.
14. In the **Day of month**, select a day of month for the single date.
15. In the **Day of week** box, select a weekday for the single date.
16. Click **OK**.
17. On the **File** menu, click **Save**.

17.3 Editing a Date Exception Event

You edit a date exception event to change the information about an exception event.

To edit a date exception event

1. In WorkStation, in the **System Tree** pane, select the schedule containing the date exception event you want to edit.
2. Click the **Basic** tab.

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3. In the calendar view, select the date when the date exception event you want to edit is valid.

4. In the event grid, select the date exception event you want to edit.

5. Click the **Edit schedule event** button  .

6. In the **Schedule Event Properties** dialog box, edit the properties.

Component	Description
Event type	Click **Exception** to display the exception types.
Exception type	Select **Single date** for the exception type to apply to the schedule.
	Click to add a line to the **Times and values** box.
	Click to delete an entry from the **Times and values** box.
All Day	Select to create an all day event.
Name	Type a name for the exception event.
Priority	Select a priority number between 1 (highest priority) and 16 (lowest priority).
Year	Select a year. You can use **Any year** as a valid entry.
Month	Select a month for the exception event or **Odd month**, **Even month**, **Any month**.
Day of month	Select a value for the day of the month. You can use **Any Day**, **Last day**, **Odd days** or **Even days** as valid entries.

Continued on next page

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Component	Description
Day of week	Select a day of the week. Setting the value to **Any Day** ensures consistency with the rest of the date specification, this is the recommended setting.

7. Click **OK**.

17.4 Adding a Date Range Exception Event

You create a date range exception to schedule a date range event that takes precedence over a scheduled weekly event.

To add a date range exception event

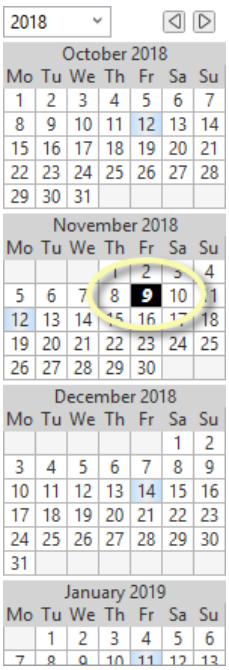
1. In WorkStation, in the **System Tree** pane, select the schedule you want to add the date range exception event to.
2. Click the **Basic** view.
3. On the **Basic** toolbar, click the **New schedule event** button  .
4. In the **Schedules Event Properties** dialog box, under **Event type**, click **Exception**.
5. Under **Exception type**, click **Date range**.
6. Select **All Day** to have the event last all day.
7. In the **Value** box, enter a value.
8. In the **Name** box, type a name for the exception.
9. In the **Priority** box, select a priority.
10. In the **Year** box, select a year for the start date and the end date.
11. In the **Month** box, select a month for the start date and end date.
12. In the **Day of month** box, select a day of the month for the start date and end date.
13. In the **Day of week** box, select a day of the week for the start date and end date.
14. Click **OK**.

17.5 Editing a Date Range Exception Event

You edit a date range exception event to change the information about an exception event.

To edit a date range exception event

1. In WorkStation, in the **System Tree** pane, select the schedule containing the date range exception event you want to edit.
2. Click the **Basic** tab.
3. In the calendar view, select the date when the date range exception event you want to edit is valid.



4. In the event grid, select the date range exception event you want to edit.
5. Click the **Edit schedule event** button  .
6. In the **Schedule Event Properties** dialog box, edit the properties.

Property	Description
Event type	Click **Exception** to display the exception types.
Exception type	Select **Date range** for the exception to apply to the schedule.
	Click to add a line to the **Times and values** box.
	Click to delete an entry from the **Times and values** box.
All Day	Select to create an all day event.
Name	Type a name for the event.
Priority	Select a priority number between 1 (highest priority) and 16 (lowest priority).
Year	Select a year. You can use **Any year** as a valid entry.

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Property	Description
Month	Select a month for the exception event or **Odd month**, **Even month**, **Any month**.
Day of month	Select a value for the day of the month. You can use **Any Day**, **Last day**, **Odd days** or **Even days** as valid entries.
Day of week	Select a day of the week. Setting the value to **Any Day** ensures consistency with the rest of the date specification, this is the recommended setting.

7. Click **OK**.

17.6 Adding a Calculated Exception Event

You create a calculated exception to schedule a recurring event that takes precedence over a scheduled weekly event.

To add a calculated exception event

1. In WorkStation, in the **System Tree** pane, select the schedule you want to add the calculated exception event to.
2. Click the **Basic** tab.
3. On the **Basic** toolbar, click the **New schedule event** button  .
4. In the **Schedule Event Properties** dialog box, under **Event type**, click **Exception**.
5. Under **Exception type**, click **Calculated**.
6. Select **All Day** to have the event last all day.
7. In the **Name** box, type a name for the exception.
8. In the **Priority** box, enter a priority.
9. In the **Month** box, select a month.
10. In the **Week of month** box, select a week of the month.
11. In the **Day of week** box, select a day of the week.
12. Click **OK**.

17.7 Editing a Calculated Exception Event

You edit a calculated exception event to change the information about an exception event.

To edit a calculated exception event

1. In WorkStation, in the **System Tree** pane, select the schedule you want to edit.
2. In the Work area, click the **Basic** view.

3. In the Event grid, select the calculated exception event you want to edit.
4. On the **Basic** toolbar, click the **Edit schedule event** button  .
5. In the **Schedule Event Properties** dialog box, edit the properties.

Property	Description
Event type	Click **Exception** to display the exception types.
Exception type	Select **Calculated** for an exception type to apply the schedule.
	Click to add a line to the **Times and values** box.
	Click to delete an entry from the **Times and values** box.
All Day	Select to create an all day event.
Name	Type a name for the event.
Priority	Select a priority number between 1 (highest priority) and 16 (lowest priority).
Year	Select a year. You can use **Any year** as a valid entry.
Month	Select a month for the exception event or **Odd month**, **Even month**, **Any month**.
Week of month	Select a week of the month for the exception event or **First week**, **Second week**, **Third week**, **Fourth week**, **Last week**, **Any week**. • **First week** – the first through the seventh day of the month. The second week is then considered day of month eight through fourteen and so on. Since the dates do not necessarily correspond to the first row of the calendar, they may include dates from both the first and second row of the calendar. • **Fifth week** – days 29 through 31 if they exist. It is always less than seven days and is non-existent in February except in a leap year. • **Last week** – the last seven days of the month. It differs from the **Fifth week**.
Day of week	Select a day of the week. Setting the value to **Any Day** ensures consistency with the rest of the date specification, this is the recommended setting.

6. Click **OK**.

17.8 Adding a Calendar Exception Event

You add a calendar to the schedule to make an exception event for all dates specified in the calendar.

For more information, see section 18.1 “Calendars in WorkStation” on page 177.

To add a calendar exception event

1. In WorkStation, in the **System Tree** pane, select the schedule you want to add the calendar to.

Continued on next page

2. Click the **Basic** tab.
3. On the **Basic Schedule Editor** toolbar, click the **New schedule event** button  .
4. In the **Schedule Event Properties** dialog box, click **Exception**.
5. Click **Calendar**.
6. Select **All Day** if the exception event is to be on or off all day.
7. In the **Start Time** column, type a start time for the exception event.
8. In the **End Time** column, type an end time for the exception event.
9. In the **Value** column, select a value for the exception event.
10. In the **Name** box, type a name for the exception event.
11. In the **Priority** box, select a priority for the exception event to make it override conflicting events with lower priorities.
12. In the **Calendar** box, enter the calendar that you want to add.
13. Click **OK**.
14. On the **File** menu, click **Save**.

NOTE:

- You cannot specify different times and values for each of the different dates. All dates specified in the calendar must have the same times and values assigned to them.

17.9 Editing a Calendar Exception Event

You edit a calendar exception event to change the information about an exception event.

To edit a calendar exception event

1. In WorkStation, in the **System Tree** pane, select the schedule containing the calendar exception event you want to edit.
2. Click the **Basic** tab.

Continued on next page

3. In the calendar view, select the date when the calendar exception event you want to edit is valid.

4. In the event grid, select the calendar exception event you want to edit. To edit the dates for the calendar exception, you need to separately open the calendar object itself. For more information, see section 18.5 “Editing a Date Calendar Event” on page 180.

5. Click the **Edit schedule event** button .

6. In the **Schedule Event Properties** dialog box, edit the properties:

Property	Description
Event type	Click **Exception** to display the exception types.
Exception type	Select **Calendar** to initiate a calendar reference.
All Day	Select to create an all day event.
+	Click to add a line to the **Times and values** box.
	Click to delete an entry from the **Times and values** box.
Name	Type a name for the event.
Priority	Select a priority number between 1 (highest priority) and 16 (lowest priority).
Calendar	Select a calendar to reference.

7. Click **OK**.

8. On the **File** menu, click **Save**.

18 Schedules Calendars

What's in This Chapter?

18.1 Calendars in WorkStation

A calendar is a list of dates. The calendar provides the schedule with the dates when the exception events shall occur. To save time, you can reference a single calendar rather than entering several exception events in a schedule.

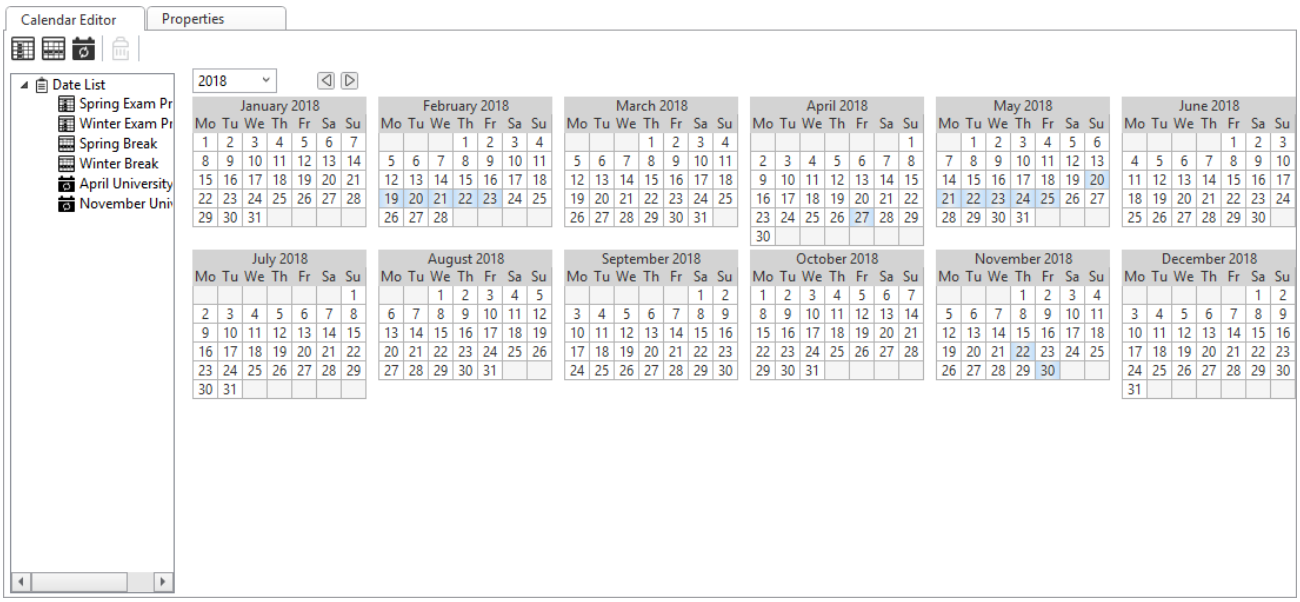


Figure – Exception events in a calendar

Many schedules can make a reference to the calendar. You can define the group of dates once rather than over and over again in multiple schedules, a potentially tedious task if your building control system contains many schedules.

18.1.1 Calendar Editor Overview

You use the Calendar Editor to create a calendar that contains a date list of exception events. The exception events can be a single date, a date range, or a recurring date. By using a calendar, you specify all the exception events only one time, rather than in each schedule. The calendar is then referenced to each of the schedules and all exception dates are automatically designated in the schedules.

For more information, see section 18.2 “Calendar Editor Overview” on page 178.

18.1.2 Calendar Events

The dates specified in a calendar are shown in the date list. You can specify dates in a calendar by three different methods:

- Date: a specific date
- Date range: a fixed period with a set start and stop date
- Calculated date: a fixed period that repeats

For more information, see section 18.3 “Calendar Events” on page 179.

18.2 Calendar Editor Overview

The Calendar Editor is the editor you use to create a date list of exception events. The date list can include a single date, a date range, or a recurring date. You use the calendar when creating a schedule that uses a Calendar Reference Exception. You can apply one calendar to many schedules.

The following figure displays the calendar with all of the exception events in blue. The exception events are also in a list view.

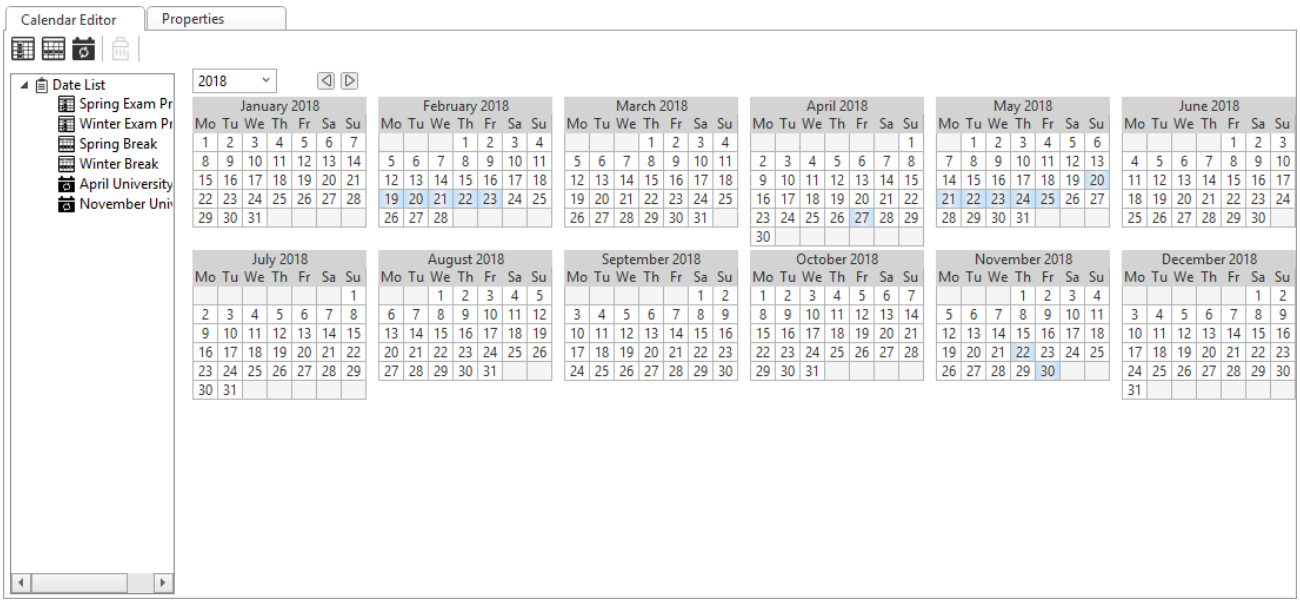


Figure – Calendar Editor Overview

18.3 Calendar Events

The dates specified in a calendar are shown in the date list. You can specify dates in a calendar by three different methods:

- Date: a specific date
- Date range: a fixed period with a set start and stop date
- Calculated date: a fixed period that repeats

18.3.1 Date Calendar Events

A single date within a calendar is an entry that occurs once or every year on the same date.

The following single date entry choices schedule an event on a single date, January 1, 2009:

- Year - 2009
- Month - January
- Day of month - 1
- Day of week - Any day

The following single date entry choices schedule an event on a single date every year, January 1:

- Year - Any Year
- Month - January
- Day of month - 1
- Day of week - Any day

The following choices produce an error message:

- A day, month, and year combination that does not coincide
  An example is Friday, March 5, 2009. This date actually falls on a Thursday.
- Any years past 2105
- An explicit day that is out of range
  An example is September 31 or February 29 in a non-leap year.

18.3.2 Date Range Calendar Events

You can include a date range in the date list. A date range is a series of days to include in a calendar. An example of a date range is January 1, 2009 to January 31, 2009, which adds the entire month of January to the calendar as an event. You can use this date range for a device, such as a thermostat, to behave differently for the whole month of January.

18.3.3 Calculated Calendar Events

You can include a calculated date on a date list. A calculated date has no set start and stop date. For example, you use a calculated date to schedule the first week of the even months on a Friday.

18.4 Adding a Date Calendar Event

You add a date to a calendar to specify an exception date for a specific day, such as 7 May, 2013.

For more information, see section 18.3 “Calendar Events” on page 179.

To add a date calendar event

1. In WorkStation, in the **System Tree** pane, select the calendar you want to add the exception to.
2. Click the **Calendar Editor** tab.
3. On the **Calendar Editor** toolbar, click the **Add Date** button  .
4. In the **Edit Calendar Entry** dialog box, in the **Entry name** box, type the name that you want to display on the date list.
5. In the **Year** box, select the year for the date.
6. In the **Month** box, select the month for the date.
7. In the **Day of month** box, select the day for the date.
8. In the **Day of week** box, select the weekday for the date.
9. Click **OK**.
10. On the **File** menu, click **Save**.

18.5 Editing a Date Calendar Event

You edit a date calendar to change the information about a calendar event.

To edit a date calendar event

1. In WorkStation, in the **System Tree** pane, select the calendar you want to edit.
2. Click the **Calendar Editor** tab.
3. In the date list, right-click the date calendar event you want to edit and click **Properties**.

Continued on next page

4. In the **Edit Calendar Entry** dialog box, edit the properties.

Component	Description
Entry name	Type an entry name for the calendar entry.
Year	Select a year. You can use **Any year** as a valid entry.
Month	Select a month for the exception event or **Odd month**, **Even month**, **Any month**.
Day of month	Select a value for the day of the month. You can use **Any Day**, **Last day**, **Odd days** or **Even days** as valid entries.
Day of week	Select a day of the week. Setting the value to **Any Day** ensures consistency with the rest of the date specification, this is the recommended setting.

5. Click **OK.**

18.6 Adding a Date Range Calendar Event

You add a date range to a calendar to specify two or more consecutive days with a specific start and end date, such as 19 March to 23 March, 2013.

For more information, see section 18.3 “Calendar Events” on page 179.

To add a date range calendar event

1. In WorkStation, in the **System Tree** pane, select the calendar you want to add the exception to.
2. Click the **Calendar Editor** tab.
3. On the **Calendar Editor** toolbar, click the **Add Date Range** button  .
4. In the **Edit Calendar Entry** dialog box, in the **Entry name** box, type the name that you want to display on the date list.
5. In the **Start year** box, select the year for the start date.
6. In the **Start month** box, select the month for the start date.
7. In the **Day of month** box, select the day for the start date.
8. In the **Day of week** box, select the weekday for the start date.
9. In the **Year** box, select the year for the end date.
10. In the **Month** box, select the month for the end date.
11. In the **Day of month** box, select the day for the end date.
12. In the **Day of week** box, select the weekday for the end date.
13. Click **OK**.
14. On the **File** menu, click **Save**.

18.7 Editing a Date Range Calendar Event

You edit a date range calendar to change the information about a calendar event.

To edit a date range calendar event

1. In WorkStation, in the **System Tree** pane, select the calendar you want to edit.
2. In **Calendar Editor**, select the date range calendar.
3. Right-click the date range calendar.
4. In the **Edit Calendar Entry** dialog box, edit the properties.

Component	Description
Entry name	Type an entry name for the calendar entry.
Start year	Select a year. You can use **Any year** as a valid entry.
Start month	Select a month for the exception event or **Odd month**, **Even month**, **Any month**.
Day of month	Select a value for the day of the month. You can use **Any Day**, **Last day**, **Odd days** or **Even days** as valid entries.
Day of week	Select a day of the week. Setting the value to **Any Day** ensures consistency with the rest of the date specification, this is the recommended setting.
Year	Select a year. You can use **Any year** as a valid entry.
Month	Select a month for the exception event or **Odd month**, **Even month**, **Any month**.

5. Click **OK**.

18.8 Adding a Calculated Date Calendar Event

You add a calculated date to specify a recurring event, such as Friday of the first week of even months. Calculated dates are also used for events or holidays that do not always fall on the same date each year.

For more information, see section 18.3 “Calendar Events” on page 179.

To add a calculated date calendar event

1. In WorkStation, in the **System Tree** pane, select the calendar that you want to add the exception dates to.
2. Click the **Calendar Editor** tab.
3. On the **Calendar Editor** toolbar, click the **Add Calculated** button  .
4. In the **Edit Calendar Entry** dialog box, in the **Entry name** box, type the name that you want to display on the date list.

Continued on next page

5. In the **Month** box, select a month for the calculated date.
6. In the **Week of month** box, select the week of month for the calculated date.
7. In the **Day of week** box, select a weekday for the calculated date.
8. Click **OK**.
9. On the **File** menu, click **Save**.

18.9 Editing a Calculated Date Calendar Event

You edit a calculated date calendar to change the information about a calendar event.

To edit a calculated date calendar event

1. In WorkStation, in the **System Tree** pane, select the calendar you want to edit.
2. In **Calendar Editor**, select the calculated date calendar.
3. Right-click the calculated date calendar.
4. In the **Edit Calendar Entry** dialog box, edit the properties.

Component	Description
Entry name	Type an entry name for the calendar entry.
Month	Select a month for the exception event or **Odd month**, **Even month**, **Any month**.
Week of month	Select a week of the month for the exception event or **First week**, **Second week**, **Third week**, **Fourth week**, **Last week**, **Any week**. • **First week** – the first through the seventh day of the month. Be aware that it does not necessarily correspond to the first row of the calendar since it may include dates from both the first and second row of the calendar. • **Fifth week** – days 29 through 31 if they exist. It is always less than seven days and is non-existent in February except in a leap year. • **Last week** – the last seven days of the month. It differs from the **Fifth week**.
Day of week	Select a day of the week. Setting the value to **Any Day** ensures consistency with the rest of the date specification, this is the recommended setting.

5. Click **OK**.

18.10 Deleting a Date List Entry from a Calendar

You delete a date list entry from a calendar to remove the entry from a schedule.

To delete a date list entry from a calendar

1. In WorkStation, in the **System Tree** pane, select the calendar.

Continued on next page

2. In the work area, click the **Calendar Editor** view.
3. In the **Date List**, select an entry.
4. On the **Calendar Editor** toolbar, click the **Delete** button  .

Repeat the procedure to delete additional date list entries.

19 Graphics

What's in This Chapter?

19.1 How Graphics Work

You use graphics to display building overviews, display values from sensors, or change setpoints. A graphic can also contain links to trend charts, trend log lists, Internet sites, or views in WorkStation and WebStation.

A graphic that contain links to documents, such as Microsoft Word or Adobe PDF, can be opened in WorkStation and WebStation. The associated programs, in this case Microsoft Word or Adobe Reader, has to be installed on the computer running WorkStation or WebStation.

Figure – A Graphic with links and interactive components like gauges in WorkStation

19.2 Changing a Value in a Graphic

You change a value in a graphic when you want a different value.

For more information, see section 19.1 “How Graphics Work” on page 185.

To change a value in a graphic

1. In WorkStation or WebStation, click the graphic with the value you want to change.
2. Click the value you want to change.
3. In the Edit properties dialog box, enter the new value.
4. Click **OK**.

19.3 Scrolling in a Graphic

You scroll to move the graphic vertically or horizontally to see more of the graphic.

For more information, see section 19.1 “How Graphics Work” on page 185.

To scroll in a graphic

1. Click the **Scroll** button  .
2. Use the hand to move around in the graphic.

19.4 Resetting Zoom in a Graphic

You restore the graphic to its original size using Reset Zoom after you increased or decreased the size of the graphic.

For more information, see section 19.1 “How Graphics Work” on page 185.

To reset zoom in a graphic

1. Click the **Reset Zoom** button  .

19.5 Zooming In an Area of a Graphic

You zoom in a graphic to view a part of the graphic in more detail.

For more information, see section 19.1 “How Graphics Work” on page 185.

To zoom in an area of a graphic

1. Click the **Zoom In** button  .
2. Drag the magnifier over the area in the graphic you want to increase in size.

19.6 Zooming Out from a Graphic

You zoom out from a graphic to get a better overview of the graphic.

For more information, see section 19.1 “How Graphics Work” on page 185.

To zoom out from a graphic

1. Click the **Zoom Out** button  .

Continued on next page

2. Click in the graphic until the graphic is the size you want.

20 Documents

What's in This Chapter?

20.1 How Documents Work

You can open documents stored on an EcoStruxure BMS server using the default program associated with the file type. For example, a txt-file opens Notepad and a ppt-file opens PowerPoint.

You can edit the documents and then save them again using WorkStation. You cannot edit and save documents using WebStation.

> **IMPORTANT:** When you log off or are automatically logged off, any unsaved changes in the document are not saved in the database. Make sure that you save changes in open documents frequently.

20.2 Opening a Document

You open, edit, and save documents stored on an EcoStruxure BMS server using the default editor associated with the file type. For example, the Notepad editor opens a text file.

For more information, see section 20.1 “How Documents Work ” on page 188.

To open a document

1. In WorkStation, in the **System Tree** pane, click the document.
2. When the editor opens the document, you can view or modify the file.
3. When finished, save and close the document.

21 WorkStation User Interface

What's in This Chapter?

21.1 WorkStation Workspace

Use the Workspace in WorkStation to edit and display information on an EcoStruxure BMS server.

IMPORTANT:

- WorkStation can be displayed in a number of ways. Not all components in this document are visible in your WorkStation.

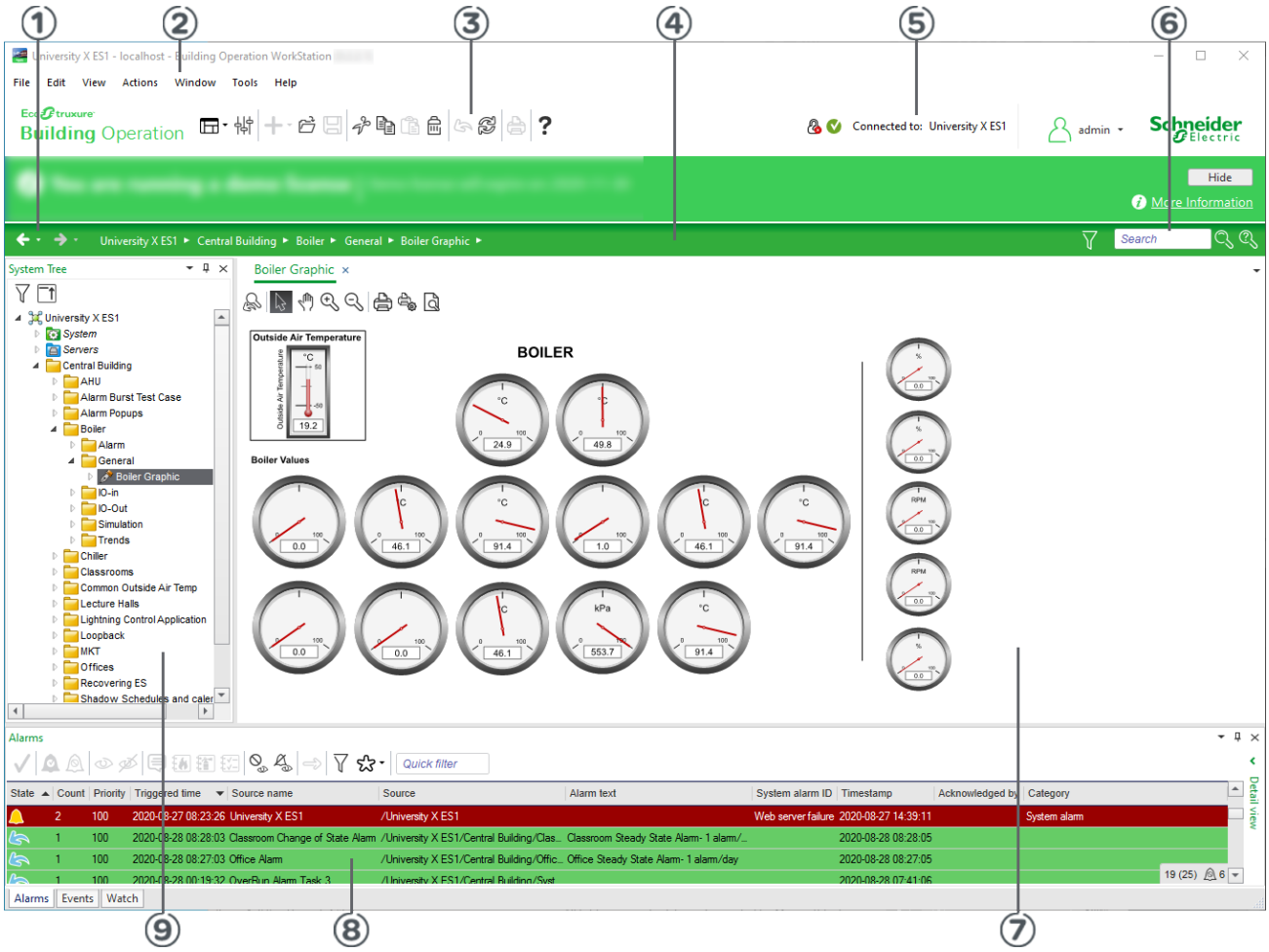


Figure – WorkStation Workspace

Continued

Number	Description
①	**History bar** Use the History bar to go back and forward. For more information, see section 21.7 “History Bar” on page 202.
②	**Menu bar** Use the Menu bar to access the main menus in WorkStation. For more information, see section 21.5 “Menu Bar” on page 200.
③	**Toolbar** Use the buttons in Toolbar for easy access to commands you use frequently. For more information, see section 21.4 “WorkStation Toolbar” on page 198.
④	**Address bar** Use the Address bar to browse the system. For more information, see section 21.6 “Address Bar” on page 201.
⑤	**Status bar** Use the Status bar to view the connectivity status, logon information, and localization information for the system. For more information, see section 21.8 “Status Bar” on page 203.
⑥	**Search View** Use Search in WorkStation to find and view objects in the database. For more information, see the *Search View* topic on WebHelp.
⑦	**Work area** Use the Work area to display and work with graphics, trend charts, trend log lists, reports and schedules. For more information, see section 19.1 “How Graphics Work” on page 185. For more information, see section 13.1 “How Trend Charts Work” on page 87. For more information, see section 14.1 “Trend Log Lists in WorkStation” on page 114. For more information, see the *How Reports Work* topic on WebHelp.

Continued

Number	Description
⑧	**Views and panes** Use views and panes to handle alarms and events and to watch variables. For more information, see section 21.39 “Alarms Pane and Alarm View ” on page 248. For more information, see section 21.57 “Events Pane and Event View” on page 271. For more information, see section 21.11 “Watch Pane and Watch View” on page 206.
⑨	**System Tree pane** Use the System Tree pane to view, create, delete, copy, rename and move objects. For more information, see section 21.9 “System Tree Pane” on page 204.

21.2 Building Operation WorkStation Window

Use the **Building Operation WorkStation** window to log on to WorkStation.

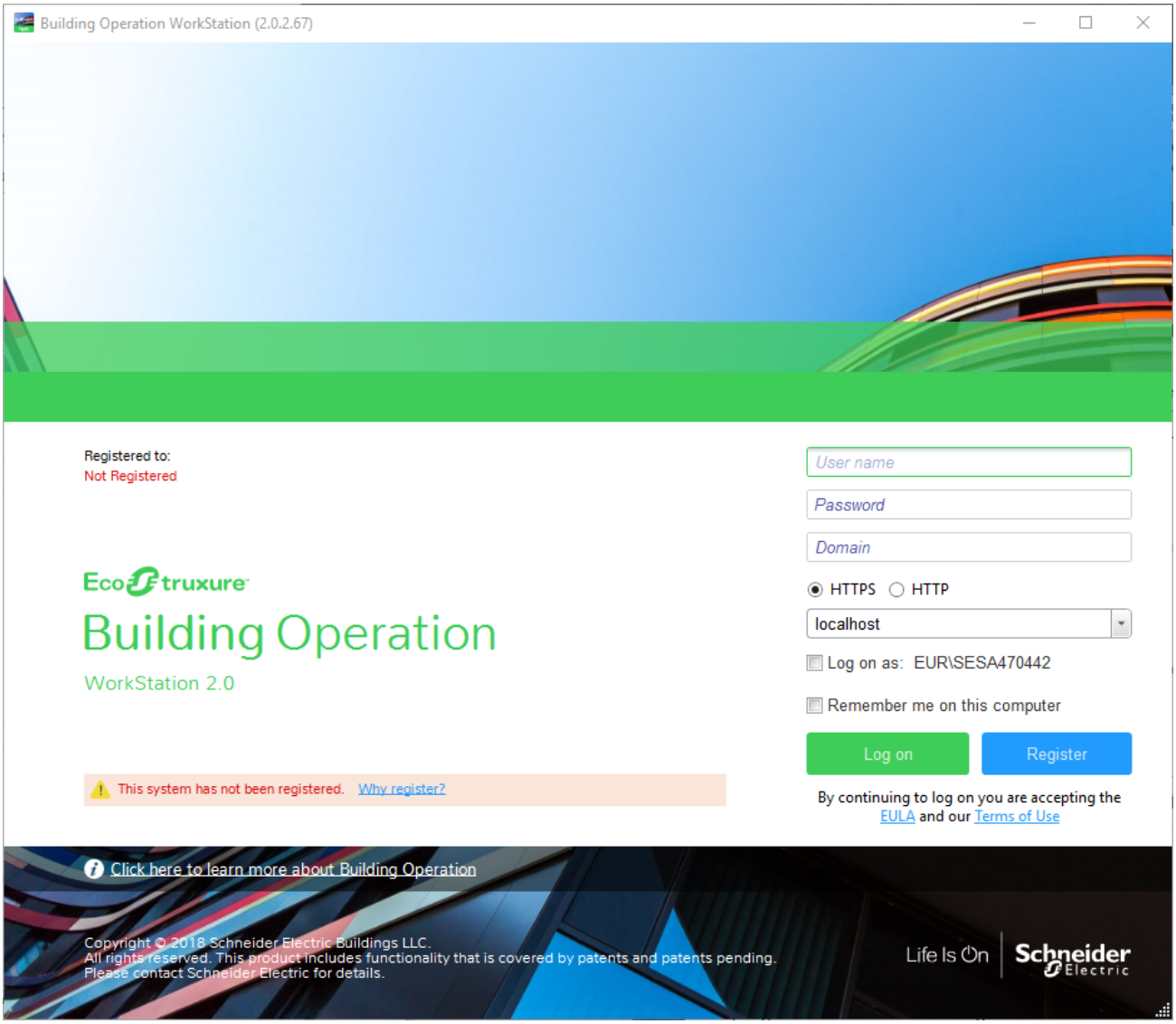


Figure – Building Operation WorkStation

Table – Building Operation WorkStation

Component	Description
User name	Type the user name of your EcoStruxure Building Operation user account. For more information, see the *User Accounts and User Account Groups* topic on WebHelp.
Password	Type the password of your EcoStruxure Building Operation user account or of your Windows user account.

Continued

Component	Description
Domain	Type the name of the EcoStruxure Building Operation domain that you want to log on to. If you do not enter a domain, you are logged on to the local domain. For more information, see the *Domains* topic on WebHelp.
Server	Select the Server hypertext transfer protocol option for communication with the EcoStruxure BMS server. Enter an EcoStruxure BMS server name or an IP address for the EcoStruxure BMS server you want to log on to.
Log on as	Click to log on to WorkStation with your Windows user account. For more information, see the *User Accounts and User Account Groups* topic on WebHelp.
Remember me on this computer	Select to save the entered information. The information is automatically filled in the next time you log on.
Log on	Click to log on to WorkStation.
Click here to learn more about Building Operation	Click to open the WebHelp home page. For more information, see the *WebHelp Overview* topic on WebHelp.

21.3 Display Names and IP Addresses of Servers Drop-Down List Box

You use the **Display Names and IP Addresses of Server**s drop-down list box to add, edit and delete the display names of the server addresses. You also use it to export, import and delete lists of the display names and IP addresses of servers.

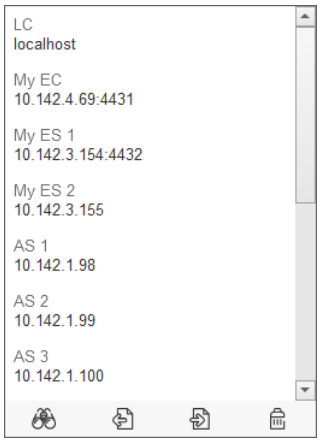


Figure – Display Names and IP Addresses of Servers drop-down list box

Table – Display Names and IP Addresses of Servers Drop-Down List Box

Command	Description
	**Edit** Click to edit the display name of the server address. For more information, see section 1.9 “Editing the Display Name of the Server Address” on page 22.
	**Delete** Click to delete display name and the IP address of the server. For more information, see section 1.10 “Deleting the Display Name and the IP Address of a Server” on page 22.
	**Export** Click to export the list of the display names and IP addresses of servers. For more information, see section 1.11 “Exporting the List of the Display Names and IP Addresses of Servers” on page 22.
	**Import** Click to import a list of the display names and IP addresses of servers. For more information, see section 1.12 “Importing a List of the Display Names and IP Addresses of Servers” on page 23.
	**Remove all** Click to the display names and IP addresses of servers. For more information, see section 1.13 “Clearing the List of the Display Names and IP Addresses of Servers” on page 23.

Continued

Command	Description
	**Discover** Click to display servers from your network.

21.4 WorkStation Toolbar

Use the buttons on the **WorkStationtoolbar** for easy access to commands you use frequently.

Table – WorkStation Toolbar

Button	Description
	**Workspace** Click to open the Workspace menu where you can select a workspace. For more information, see the *List View* topic on WebHelp.
	**Control Panel** Click to open the Control Panel where you get access to some of the most used administration functions, such as alarms, domains, user accounts, backup and archiving, and engineering. For more information, see the *Control Panel View* topic on WebHelp.
	**New** Click to open the New submenu where you create new objects. For more information, see section 21.17 “File Menu – New Submenu” on page 214.
	**Open in New** Click to open the selected object in a new tab in the work area.
	**Save** Click to save changes.
	**Cut** Click to cut the selected objects. The objects are placed on the clipboard.
	**Copy** Click to copy the selected objects. The objects are placed on the clipboard.
	**Paste** Click to paste a copied or cut object.
	**Delete** Click to open the **Confirm delete** dialog box where you delete the selected object. For more information, see the *Confirm Delete Dialog* topic on WebHelp.
	**Cancel** Click to cancel the latest command.
	**Refresh** Click to refresh the selected object or workspace.
	**Print** Click to print the selected object.

Continued

Button	Description
	**Help** Click to open the EcoStruxure BMS help.

21.5 Menu Bar

Use the Menu bar to access the different file menus in WorkStation.

Figure – Menu bar

Table – Menu Bar

Component	Decription
File	Click to open the File menu, where you log off from the system, import and export information, print, and create new objects. For more information, see section 21.16 “File Menu ” on page 212.
Edit	Click to open the Edit menu, where you edit objects in the system. For more information, see the *Edit Menu* topic on WebHelp.
View	Click to open the View menu, where you display or hide Workspace components. For more information, see section 21.18 “View Menu” on page 224.
Actions	Click to open the Actions menu, where you carry out commands for objects selected in the System Tree pane or List View. For more information, see the *Actions Menu* topic on WebHelp.
Window	Click to open the Window menu, where you close or navigate between open windows. For more information, see section 21.21 “Window Menu” on page 228.
Tools	Click to open the Tools menu, where you open the Control Panel and the Options dialog box. For more information, see the *Tools Menu* topic on WebHelp.
Help	Click to open the Help menu, where you access the help and view information about the WorkStation version number. For more information, see section 21.22 “Help Menu” on page 229.

21.6 Address Bar

Use the **Address bar** to browse the system. The Address bar is located at the top of the Workspace.

Figure – The Address bar

The Address bar is the equivalent of the Address bar in Windows and can be used for browsing the system and for copying addresses that you want to paste in other areas of the system, for example, in the Bindings View.

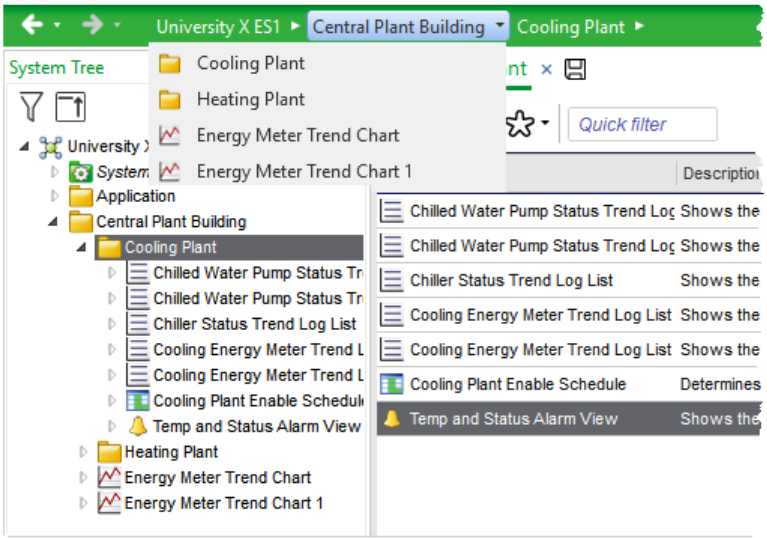


Figure – The Address bar

Table – The Adress bar filter

Button	Description
	**Show/Hide non-presentation objects** Click to show non-presentation objects.

21.7 History Bar

Use the **History bar** to go back and forward to views you have visited before.

Figure – The History bar

Table – The History bar

Button	Description
	**Back** Click to go back to a view you have visited before in the selected window.
	**Forward** Click to go forward to a view you have visited before in the selected window.

21.8 Status Bar

Use the Status bar to view information on the following items:

- connectivity status
- security certificates
- which EcoStruxure BMS server the user is logged on to
- the name of the logged on user account
- which domain the user is logged on to
- whether or not database mode is active
- the current language
- the measurement system

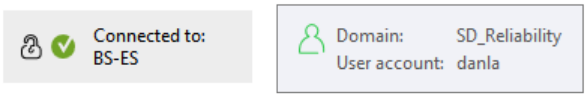


Figure – Status bar

Component	Description
	Indicates that the security certificate is valid.
	Indicates that the security certificate cannot be validated.
	Connected to Indicates that WorkStation is connected to the EcoStruxure BMS server.
	Trying to connect to Indicates that WorkStation is disconnected from the EcoStruxure BMS server and trying to connect.
User account	Displays the account you are currently using.
Domain	Displays the domain you are logged on to.
	Database mode Indicates that database mode is active. For more information, see the *Database Mode* topic on WebHelp.
Current language	Displays the current display language of the system in the drop-down menu beside the user account.
Measurement system	Displays the selected measurement system for the system in the drop-down beside the user account.

21.9 System Tree Pane

Use the System Tree Pane to view and manage the structure of the EcoStruxure Building Operation database. In the System Tree pane you can view, create, delete, copy, rename, and move objects.

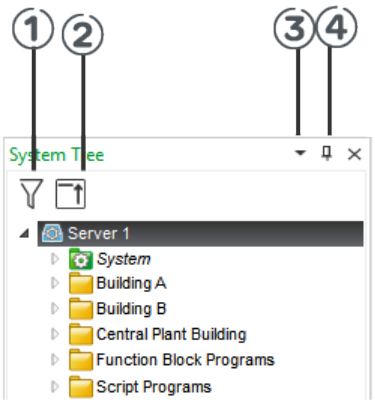


Figure – System Tree pane

Table – System Tree Pane

Number	Description
①	**Show/Hide non-presentation objects** Toggle between showing and hiding non-presentation objects, that is, objects required when engineering the EcoStruxure BMS.
②	**Collapse all** Click to collapse the System Tree so that only the EcoStruxure BMS server of the EcoStruxure BMS is visible.
③	Click to customize how the System Tree pane is displayed. For more information, see section 4.1 “Customization” on page 37.
④	Click to unpin the System Tree pane and collapse it to the side.

21.10 List View

Use the List View to view, manage, and mass edit objects in the EcoStruxure Building Operation database.

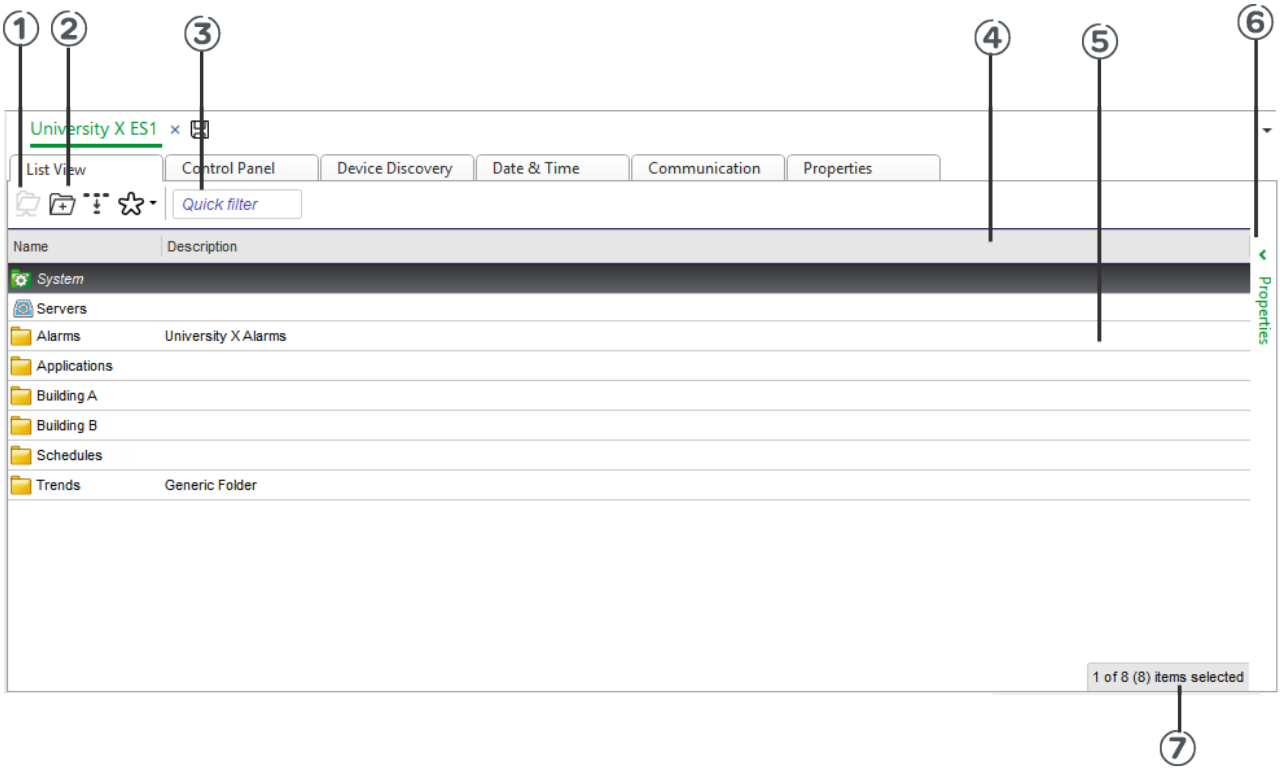


Figure – List View

Table – List View

Number	Description
①	**Parent folder** Use Parent folder to move up in the hierarchy to the folder containing the folder or object currently displayed in the List View. For more information, see the *List View Toolbar* topic on WebHelp.
②	**Create folder** Use Create folder to create a new folder. For more information, see the *Object Names* topic on WebHelp.
③	**Quick filter** Enter a word to filter on. For more information, see section 5.11 “Quick Filter ” on page 49..
④	**Column row** Use the column row to view the contents of the List View and to open the column heading menu. For more information, see section 21.32 “Column Row Context Menu” on page 241.

Continued

Number	Description
⑤	Use the list to view the contents of the selected folder or object in the List View.
⑥	**Properties** Use Properties to view the properties of the object you have selected in the List View. For more information, see the *Object Properties* topic on WebHelp.
⑦	Use the list information to view the total number of objects iand the selected number of objects in the List View.

21.11 Watch Pane and Watch View

You can drag objects to the Watch pane or a Watch View to monitor their live values and other properties, for example, to monitor the impact of a change you are about to make in your system. Property changes are immediately displayed in the Watch pane or Watch View. You can add and remove property columns in the Watch pane or Watch View.

Dragging an object to the Watch pane or Watch View, you get different results depending on whether you right-click and drag or left-click and drag:

- Right-click and drag the object to the Watch pane or Watch View. When you choose this method, you can select the properties you want to monitor.
- Left-click and drag an object to the Watch pane or Watch View. When you choose this method, the default property of the object is displayed.

The list of objects in the Watch pane is not saved when you log out of WorkStation but you can save the lists of objects to the system and reopen it from the System Tree. You can save the list of objects on the Watch View toolbar. The saved Watch view is opened in the List View. You can right-click any object in the Watch pane or a Watch View to view and edit the properties of that object. The Properties dialog box displays the properties you have chosen to monitor in the Watch pane or Watch View and also contains a link to the full properties of the object.

You can right-click an object in the Watch pane or Watch View and view the trends related to the object.

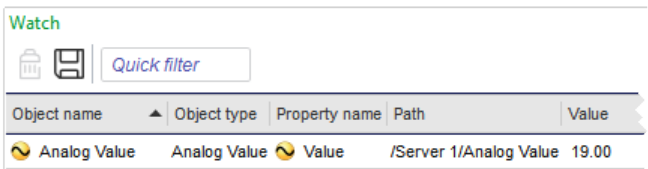


Figure – Watch Pane

21.12 Watch Pane and Watch View Toolbar

Use the **Watch** pane and **Watch View** toolbar to manage the objects in the list.

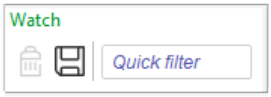


Figure – Watch pane and Watch View toolbar

Table – Watch Pane Toolbar

Component	Description
	Remove from Watch Window Click to remove a selected object from the **Watch** pane.
	Save current settings Click to save the current list of objects.
Quick filter	Enter a word or a character to filter on. For more information, see section 5.11 “Quick Filter ” on page 49.

21.13 Add/Remove Columns Dialog Box (Watch)

Use the **Add/Remove Columns** dialog box to add or remove columns from the Watch pane or a Watch View.

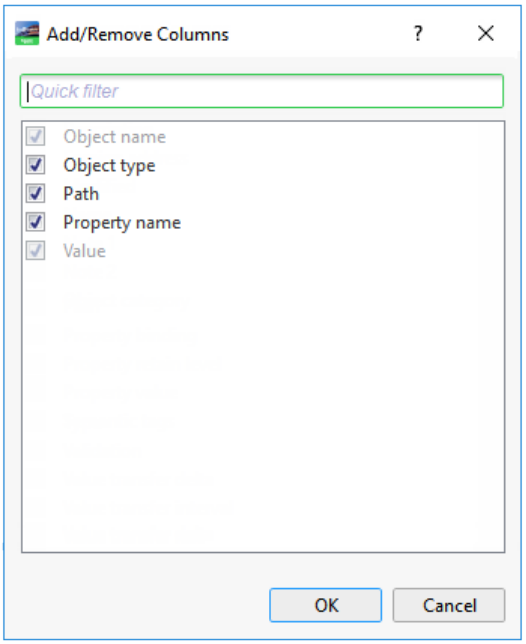


Figure – Add/Remove Columns dialog box

21.14 Pane Menu

Use the **Pane** menu to dock, float, or hide a pane. You find the Pane menu in the upper right corner of the pane.

Figure – The Pane menu

Button	Description
	Down arrow Click to float, dock, hide or autohide the pane.
	Pin Click to autohide the pane.
	Close Click to close the pane.

21.15 Add/Remove Columns Dialog Box (Search)

Use the **Add/Remove Columns** dialog box to add or remove columns to the Search View.

NOTE: The columns that are displayed in the list are the columns that are relevant for the specific search result.

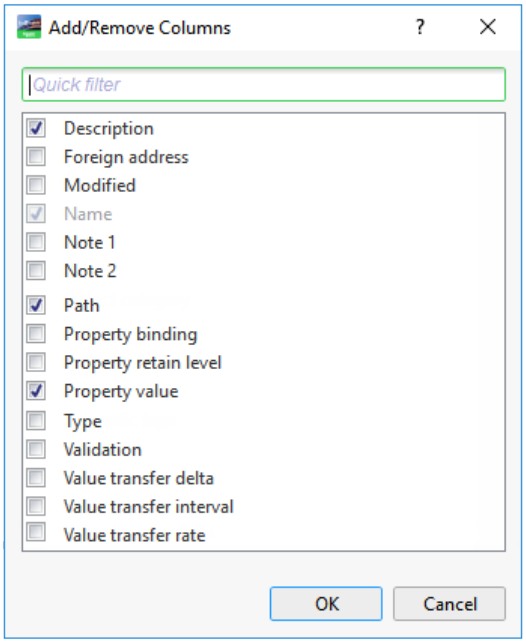


Figure – Add/Remove Columns dialog box default columns

Table – Add/Remove Columns Dialog Box Default Columns

Component	Description
Description	Select to display what the object or property is used for.
Foreign address	Select to display the address to a non-EcoStruxure Building Management product, for example a BACnet device.
Modified	Select to display the date and time when the object was last modified.
Name	Select to display the name of the object or property.
Note 1	Select to display a text that appears in a graphic or search result.
Note 2	Select to display a text that appears in a graphic or search result.
Path	Select to display the path of the object.
Property binding	Select to display the in-bound binding of the object property.

Continued

Component	Description
Property retain level	Select to display the retain level of the object property.
Type	Select to display the object type that defines the properties of the object
Validation	Select to display the value of the validation property of the object.
Value transfer delta	Select to display the transfer rate based on a delta value.
Value transfer interval	Select to display the configured transfer interval for the value.
Value transfer rate	Select to display how often a value transfer takes place.

21.16 File Menu

Use the **File** menu to log off from the system, import and export information, print, and create new objects.

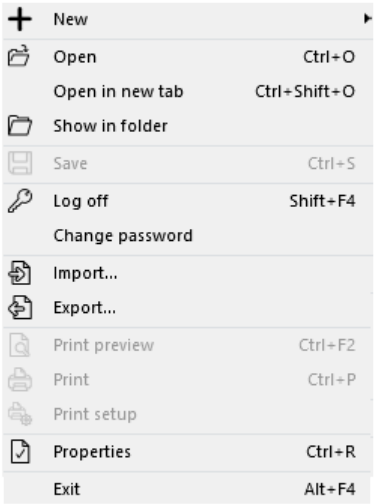


Figure – File menu

Table – File Menu

Command	Description
New	Click to open the New submenu where you create new objects. For more information, see section 21.17 “File Menu – New Submenu” on page 214.
Open	Click to open an object.
Open in new tab	Click to open the selected object in a new tab in the work area.
Show in folder	Click to display the object in its location in the System Tree folder structure.
Save	Click to save changes.
Log Off	Click to log off WorkStation. Your session ends and you are sent to the Welcome Window where you can log in again with the same or another user account. For more information, see section 21.2 “Building Operation WorkStation Window” on page 194.
Change Password	Click to open the **Change Password** dialog box where you change your password. For more information, see the *Change Password Dialog Box* topic on WebHelp.

Continued

Command	Description
Import	Click to open the **Open** dialog box where you select a previously exported solution that you want to import. After you select a file, the **Import** dialog box displays. The Import dialog box provides a summary of information about the imported file and a preview of the names and file structure of the objects to be imported. For more information, see the *Import Dialog Box* topic on WebHelp.
Export	Click to open the **Save As** dialog box where you export a solution to a file location on the WorkStation file system. The Export preview dialog box displays when there are objects in the solution that the EcoStruxure Building Operation software cannot export from the EcoStruxure BMS server. Use this dialog box to view multiple objects that the system can and cannot export from the EcoStruxure BMS server. For more information, see the *Export Preview Dialog Box* topic on WebHelp.
Print Preview	Click to preview a printout before printing.
Print	Click to print the selected object.
Print Setup	Click to adjust the print settings.
Properties	Click to open the **Properties** dialog box where you inspect or change properties for the selected object. For more information, see the *General Information Properties – Basic Tab* topic on WebHelp.
Shortcut Properties	Displays the **Properties** dialog box for the currently selected shortcut.
Exit	Click to quit WorkStation.

21.17 File Menu – New Submenu

Use the **New** submenu to create new objects.

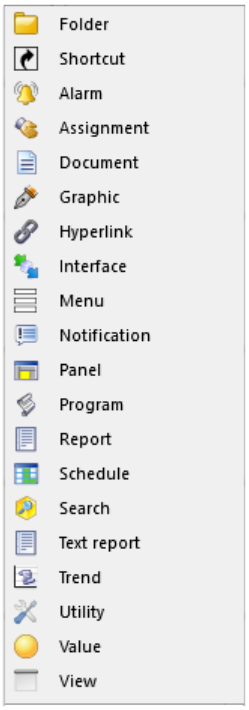


Figure – File menu - New submenu

Command	Description
Alarm	Click to open the **Create Object wizard** where you create an alarm. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. An alarm monitors a variable and alerts you if the monitored variable matches the configured alarm conditions. For more information, see the *Alarms Overview* topic on WebHelp.
Assignment	Click to open the **Create Object wizard** where you create an assignment. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. A triggered alarm can be automatically assigned to a specific user or user group that seems to be most suited to correct the problem. For more information, see the *Automatic Assignments* topic on WebHelp.
Application	Click to open the **Create Object wizard** where you create an application folder for a hosted BACnet device. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp.

Continued

Command	Description
b3 device	Click to open the **Create Object wizard** where you create a b3 device on the MSTP network. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. b3 BACnet devices are a family of intelligent, programmable, stand-alone devices that provide Direct Digital Control of air handlers and systems as well as individual terminal units. For more information, see the *b3 BACnet Device Controllers* topic on WebHelp.
BACnet device	Click to open the **Create Object wizard** where you create a BACnet device that is hosted by the local EcoStruxure BMS server. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp.
BACnet loop	Click to open the **Create Object wizard** where you create a BACnet loop that represents a feedback control loop. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. You use a BACnet loop to create a feedback system without manually creating or editing Script code. For more information, see the *BACnet Objects and Properties* topic on WebHelp.
BACnet network	Click to open the **Create Object wizard** where you create a BACnet network that is not directly connected to the EcoStruxure BMS server. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. You use a BACnet network when you want to host a device that is on a network that is not directly connected to the EcoStruxure BMS server. For more information, see the *BACnet Networks* topic on WebHelp.
BACnet notification	Click to open the **Create Object wizard** where you create a BACnet notification that can be referenced by BACnet alarms and objects configured for intrinsic alarming. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. For more information, see the *BACnet Alarms* topic on WebHelp.
BACnet program	Click to open the **Create Object wizard** where you create a BACnet program and upload the properties of a BACnet program from a BACnet device into the EcoStruxure Building Operation database. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp.

Continued

Command	Description
BACnet trend log	Click to open the **Create Object wizard** where you create a BACnet trend log that monitors and records the trends of a monitored property. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. A BACnet trend log is a property monitor for a specific object. When certain conditions are reached, a log is produced with the property value and a date/time stamp. For more information, see the *BACnet Objects and Properties* topic on WebHelp.
BBMD	Click to open the **Create Object wizard** where you create a BBMD when you want BACnet broadcast messages to be communicated throughout an IP network. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. You create BBMDs on Ethernet-based devices when you want BACnet broadcast messages to be communicated throughout an IP network.
BBMD BDT entry	Click to open the **Create Object wizard** where you create a BDT Entry for a BBMD. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. You create a BDT entry for to configure a master table for a BBMD.
Change of Value Log Set	Click to create a Change of Value Log Set subfolder. For more information, see the *Log Sets* topic on WebHelp.
Device	Click to open the **Create Object wizard** where you create a device. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp.
Document	Click to open the **Create Object wizard** where you create a document. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. A document is a container in which you can upload a file for use by the EcoStruxure Building Operation software. You can upload all types of files including reports, forms, images, and video clips. For more information, see the *Documents Overview* topic on WebHelp.

Continued

Command	Description
Extended trend log	Click to open the **Create Object wizard** where you create an extended trend log. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. An extended trend log is used to upload and store log records from a trend log in a device where space is limited. For more information, see section 15.10 “Extended Trend Logs” on page 140.
Folder	Click to open the **Create Object wizard** where you create a folder. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp.
Function Block	Click to open the **Create Object wizard** where you create a Function Block program. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. For more information, see the *Function Block Editor Overview* topic on WebHelp.
Global Values	Click to create a new Sigma global values device. For more information, see the *Global Values* topic on WebHelp.
Graphic	Click to open the **Create Object wizard** where you create a graphic. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. The created graphic is empty and has to be edited. For more information, see the *Graphics Editor* topic on WebHelp.
Graphics folder	Click to create a Sigma graphics subfolder.
Hyperlink	Click to open the **Create Object wizard** where you create a hyperlink. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. Hyperlinks are used to acces web pages on the Internet. For more information, see the *Hyperlinks* topic on WebHelp.

Continued

Command	Description
Interface	Click to open the **Create Object wizard** where you create an interface. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. The created interface can be a BACnet interface, LonWorks interface, MicroNet network, or Modbus interface/network. For more information, see the *BACnet Interface* topic on WebHelp. For more information, see the *LonWorks Overview* topic on WebHelp. For more information, see the *MicroNet Network Protocols* topic on WebHelp. For more information, see the *Modbus Overview* topic on WebHelp. For more information, see the *Web Services Overview* topic on WebHelp.
Interval Log Set	Click to create an Interval Log Set subfolder. For more information, see the *Log Sets* topic on WebHelp.
IP network	Click to open the **Create Object wizard** where you create an IP network. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp.
LonWorks Network	Opens the **Create Object wizard**, where you create a LonWorks network. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp.
MicroNet	Click to open the Create Object wizard, where you create any one of three MicroNet network types. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. MicroNet is a moderate-to-large scale Building Management System. For more information, see the *MicroNet Network Protocols* topic on WebHelp.
MicroNet ARCNET Network	Click to open the Create Object wizard, where you create a MicroNet ARCNET network. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. An ARCNET network contains ARCNET variant MicroNet devices. For more information, see the *ARCNET Networks* topic on WebHelp.

Continued

Command	Description
MicroNet NCP Network	Click to open the Create Object wizard, where you create a MicroNet NCP network. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. An NCP network is the Satchwell Native Communications Protocol proprietary network, containing NCP variant MicroNet devices. For more information, see the *NCP Networks* topic on WebHelp.
MicroNet SNP Network	Click to open the Create Object wizard, where you create a MicroNet SNP network. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. An SNP network is the Satchwell SatchNet Pro proprietary network, containing SNP variant MicroNet devices. For more information, see the *SNP Networks* topic on WebHelp.
Modbus Device	Click to open the **Create Object wizard** where you create an external slave device on a serial Modbus (master) network, or a new serial device on a Modbus TCP gateway. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. A Modbus device is any device that conforms to the Modbus standard (for example, a meter or a programmable logic controller). For more information, see the *Modbus Devices* topic on WebHelp.
Modbus Points	Click to open the **Create Object wizard** where you create a Modbus point within an external device. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. A Modbus point is an analog, digital or multistate input (or output) at a Modbus device. For more information, see the *Point and Value Types* topic on WebHelp.
Modbus TCP Device	Click to open the **Create Object wizard** where you create a Modbus TCP device. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. A Modbus TCP device is any Modbus device on a Modbus TCP network. For more information, see the *Modbus Devices* topic on WebHelp.

Continued

Command	Description
Modbus Register Group	Click to open the **Create Object wizard** where you create a Modbus register group within a Modbus device. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. A Modbus register group is a container where Modbus registers can be polled as a group by a Modbus polling device. For more information, see the *Modbus Register Groups* topic on WebHelp.
Modbus Value	Click to open the **Create Object wizard** where you create a Modbus value in a Modbus interface. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. A Modbus value is an analog, digital or multistate input (or output) at a Modbus interface. For more information, see the *Point and Value Types* topic on WebHelp.
MSTP network	Click to open the **Create Object wizard** where you create an MS/TP Network for BACnet devices or b3 devices. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. The EcoStruxure Building Operation software supports BACnet IP networks and MS/TP networks. For more information, see the *BACnet Networks* topic on WebHelp.
Network Variable	Click to open the **Create Object wizard** where you create a network variable. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp.
Notification	Click to open the **Create Object wizard** where you create a notification. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. User notifications are used for notifying users or user groups that a certain alarm event has occurred in the system. Notifications are delivered to the users as emails or written to files outside the EcoStruxure Building Operation software. For more information, see the *Notifications* topic on WebHelp.
Panel	Click to open the **Create Object wizard** where you create a panel. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. A panel can consist of one or several panes and one work area with viewable objects, for example graphics, trend charts, reports, or another panel. For more information, see the *Panel Components* topic on WebHelp.

Continued

Command	Description
Point	Click to open the **Create Object wizard** where you create a BACnet input or output point. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. You can create BACnet points in an EcoStruxure BMS server and in a hosted BACnet device. For more information, see the *BACnet Objects and Properties* topic on WebHelp.
Program	Click to open the **Create Object wizard** where you create a program. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. For more information, see the *Function Block Editor Overview* topic on WebHelp. For more information, see the *Script Editor Program Creation* topic on WebHelp.
Report	Click to open the **Create Object wizard** where you create a report. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. Click to create a report. For more information, see the *WebReports Overview* topic on WebHelp.
Schedule	Click to open the **Create Object wizard** where you create a schedule. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. Schedules are used to determine when essential events occur in a building automation system. For more information, see the *Schedules Overview* topic on WebHelp.
Search	Click to open the **Create Object wizard** where you create a search. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. Search is used for searching for objects and properties of objects in the EcoStruxure Building Operation database. For more information, see the *Search Overview* topic on WebHelp.
Segment	Click to open the **Create Object wizard** where you create a Sigma segment. For more information, see the *Sigma Representation* topic on WebHelp.
Server	Click to open the **Create Object wizard** where you create an EcoStruxure BMS server. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp.

Continued

Command	Description
Shortcut	Click to open the **Create Object wizard** where you create a shortcut. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. A shortcut is a link to an EcoStruxure BMS server, folder, or other object and is simply a pointer to an object which acts as if it is that object. For more information, see the *Shortcut Creation* topic on WebHelp.
User Account	Click to open the **Create Object wizard** where you create a user account. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. A user account uniquely identifies a user to the system. For more information, see the *User Accounts and User Account Groups* topic on WebHelp.
Domain	Click to open the **Create Object wizard** where you create a domain. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. A domain contains of user accounts, user account groups, software permissions, workspaces and one or several EcoStruxure BMS servers. For more information, see the *Domains* topic on WebHelp.
Text report	Opens the **Create Object wizard**, where you create a text report. For more information, see the *Creating a Text Report* topic on WebHelp.
Trend	Click to open the **Create Object wizard** where you create trend logs, trend log lists, or trend charts. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. The function of a trend log is to log the variable that it is connected to and store the records. For more information, see the *Trends Overview* topic on WebHelp.
Trend log	Click to open the **Create Object wizard** where you create a trend log. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. The function of a trend log is to log the variable that it is connected to and store the records. For more information, see the *Trends Overview* topic on WebHelp.

Continued

Command	Description
User account group	Click to open the **Create Object wizard** where you create a user account group. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. A user account group can contain both user accounts and other user account groups. For more information, see the *User Accounts and User Account Groups* topic on WebHelp.
Utility	Click to open the **Create Object wizard** where you create a utility. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. The utilities Signal Gererator, Simple Math Operator, and Timed Force are used during system maintenance and testing. For more information, see the *Utilities* topic on WebHelp.
Value	Click to open the **Create Object wizard** where you create a value. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp.
View	Click to open the **Create Object wizard** where you create an Event View, Alarm View, or Watch View. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. Views are used to display information in a easy way. For more information, see the *Alarms Overview* topic on WebHelp.
Workspace	Click to open the **Create Object wizard** where you create a workspace. For more information, see the *Create Object Dialog – Naming the Object Page* topic on WebHelp. A workspace is a configured layout and selection of components that display in WorkStation. For more information, see the *Workspace Components and Customization* topic on WebHelp.

21.18 View Menu

Use the **View** menu to display or hide Workspace components.

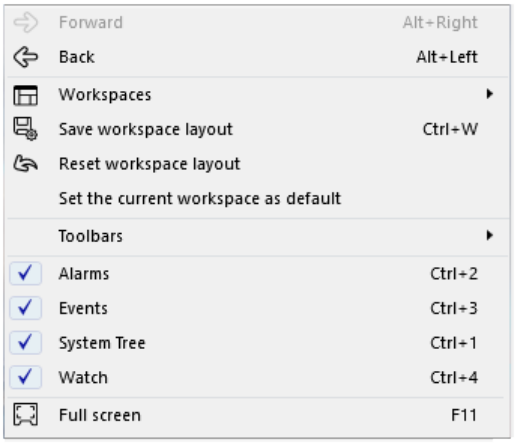


Figure – The View menu

Command	Description
Forward	Click to go forward to a view you have visited before in the selected window.
Back	Click to go back to a view you have visited before in the selected window.
Workspaces	Use the Workspaces submenu to switch to another workspace. For more information, see section 21.19 “View Menu – Workspaces Submenu” on page 226.
Save workspace layout	Click to save workspace layout changes you have made to the workspace on the local computer. For more information, see the *Workspace Components and Customization* topic on WebHelp.
Reset workspace layout	Click to reset workspace layout to the default workspace layout on the local computer. For more information, see the *Workspace Components and Customization* topic on WebHelp.
Set the current workspace as default	Click to set the current workspace layout as the default workspace on the local computer. For more information, see the *Workspace Components and Customization* topic on WebHelp.
Toolbars	Use the Toolbars submenu to hide or display the menus in WorkStation. For more information, see section 21.20 “View Menu – Toolbars Submenu” on page 227.
Watch	Select to display the Watch pane where you monitor variables. For more information, see section 21.11 “Watch Pane and Watch View” on page 206.

Continued

Command	Description
System Tree	Select to display the System Tree where you can see and work with all objects in your system. For more information, see section 21.9 “System Tree Pane” on page 204.
Events	Select to display the Events pane where you inspect events. For more information, see the *Events Pane and Event View Customization* topic on WebHelp.
Alarms	Select to display the Alarms pane where you handle alarms. For more information, see the *Alarms Pane and Alarm View Customization* topic on WebHelp.
Full screen	Select to display the selected window in the work area in full screen mode. For more information, see section 4.3 “Using Full Screen Mode” on page 39.

21.19 View Menu – Workspaces Submenu

Use the **Workspaces** submenu to switch to another workspace.

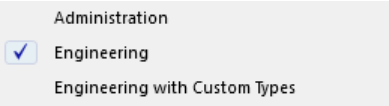


Figure – Workspaces submenu

Table – Workspaces Submenu

Command	Description
Administration	Click to switch to the default Administration workspace. For more information, see the *Workspace Components and Customization* topic on WebHelp.
Engineering	Click to switch to the default Engineering workspace. For more information, see the *Workspace Components and Customization* topic on WebHelp.
Engineering with Custom Types	Click to switch to the default Engineering with Custom Types workspace. For more information, see the *Workspace Components and Customization* topic on WebHelp.

21.20 View Menu – Toolbars Submenu

Use the **Toolbars** submenu to hide or display the Main menu and the various bars in the Workspace.

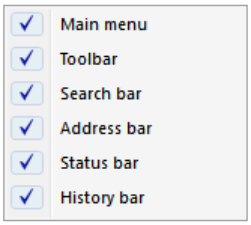


Figure – Toolbars submenu

Command	Description
Main menu	Select to display the **Main menu** where you get access to the File, Edit, View, Actions, Window, Tools, and Help menus. For more information, see section 21.5 “Menu Bar” on page 200.
Basic toolbar	Select to display the **Basic toolbar** where you access the toolbar buttons. For more information, see section 21.4 “WorkStation Toolbar” on page 198.
Search bar	Select to display the **Search bar** to perform a simple search on objects and properties in the system. For more information, see the *Search Toolbar* topic on WebHelp.
History bar	Select to display the **History bar** to go back and forward to views you have visited before. For more information, see section 21.7 “History Bar” on page 202.
Address bar	Select to display the **Address bar** to browse the system. For more information, see section 21.6 “Address Bar” on page 201.
Status bar	Select to display the **Status bar** to display the user account, domain, and EcoStruxure BMS server. For more information, see section 21.8 “Status Bar” on page 203.

21.21 Window Menu

Use the **Window** menu to navigate between open windows.

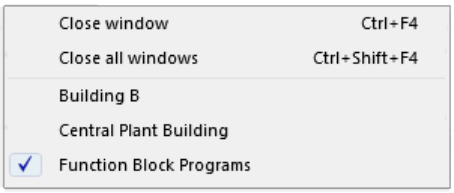


Figure – The Window menu

Command	Description
Close window	Click to close the selected window.
Close all windows	Click to close all window.
Active windows	List all active windows.

21.22 Help Menu

Use the **Help** menu to access Help, register your system, and to display information about the WorkStation version number.

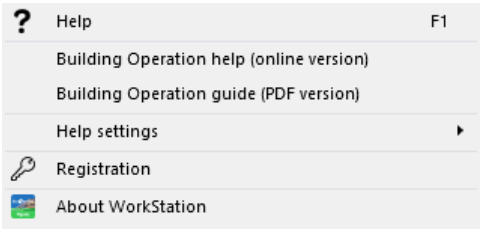


Figure – The Help Menu

Command	Description
Help	Click to open the EcoStruxure BMS help.
Building Operation help (online version)	Click to open WebHelp. You must be connected to Internet to access WebHelp. For more information, see section 7.1 “WorkStation Help” on page 58.
Building Operation guide (PDF version)	Click to access System Reference Guide, a PDF file that is supplied with WorkStation. For more information, see section 7.1 “WorkStation Help” on page 58.
Help Settings	Click to open the Help Settings submenu. For more information, see section 21.23 “Help Menu – Help Settings Submenu” on page 230.
Registration	Click to register your system. For more information, see section 2.1 “System Registration” on page 25.
About WorkStation	Click to display the name and version number for WorkStation.

21.23 Help Menu – Help Settings Submenu

Use the **Help Settings** submenu to select the help you want to use.

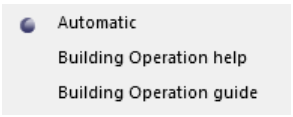


Figure – Help Settings submenu

Table – Help Settings Submenu

Command	Description
Automatic	Click to make WorkStation check if you are connected to the Internet. If you are connected, WebHelp opens. If you are not connected, the System Reference Guide opens.
Building Operation help	Click to always open WebHelp. If you are not connected to the Internet, you get an error message.
Building Operation guide	Click to always open the System Reference Guide, regardless of whether you are connected to the Internet or not.

21.24 User Menu

Use the **User** menu to access useful shortcuts from various menus in Workstation.

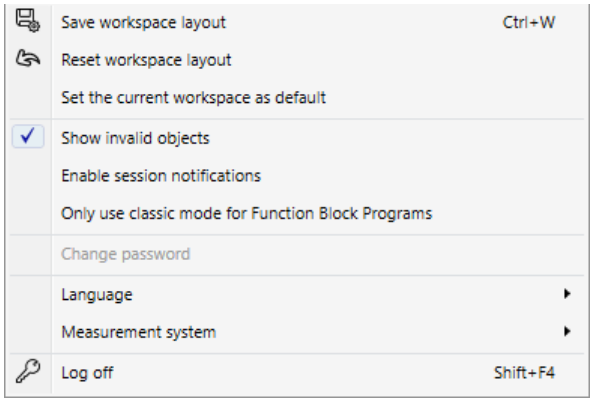


Figure – User menu

Table – User Menu

Command	Description
Save workspace layout	Click to save workspace layout changes you have made to the workspace on the local computer. For more information, see the *Workspace Components and Customization* topic on WebHelp.
Reset workspace layout	Click to reset workspace layout to the default workspace on the local computer. For more information, see the *Workspace Components and Customization* topic on WebHelp.
Set the current workspace as default	Click to set the current workspace layout as the default workspace on the local computer. For more information, see the *Workspace Components and Customization* topic on WebHelp.
Show invalid objects	Select to view invalid objects. For more information, see the *Invalid Objects Workflow* topic on WebHelp.
Enable session notifications	Select to view session notifications.
Only use classic mode for Function Block Programs	Select to only use classic mode for Function Block Programs.
Change password	Click to open the Change Password dialog box where you change your password. For more information, see the *Change Password Dialog Box* topic on WebHelp.
Language	Click to open the **Language** submenu where you select a different WorkStation language. For more information, see section 21.25 “User Menu –Language Submenu” on page 233.

Continued

Command	Description
Measurement system	Click to open the Measurement system submenu where you select a different local measurement system. For more information, see section 21.26 “User Menu – Measurement System Submenu” on page 234.
Log off	Click to log off WorkStation. Your session ends and you are sent to the Welcome Window where you can log in again with the same or another user account. For more information, see section 21.2 “Building Operation WorkStation Window” on page 194.

21.25 User Menu –Language Submenu

Use the **Language** submenu to select a language for your WorkStation.

Figure – Language submenu

Table – Language Submenu

Command	Description
Language list	Click a language to change your WorkStation language. For more information, see the *Language Packages* topic on WebHelp.

21.26 User Menu – Measurement System Submenu

Use the Measurement submenu to choose the measurement system for your Workstation.

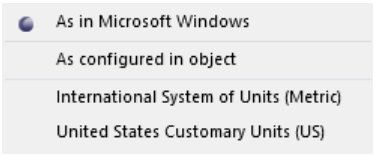


Figure – Measurement system submenu

Table – Measurement System Submenu

Command	Description
As in Microsoft Windows	Click to change the measurement system of your Workstation to the measurement system of the local Microsoft Windows.
As configured in object	Click to change the measurement system of your Workstation to the measurement system of the local Microsoft Windows.
International System of Units (Metric)	Click to change the measurement system of your Workstation to the international system of units.
United States Customary Units (US)	Click to change the measurement system of your Workstation to the United States customary units.

21.27 Registering Your System Offline Dialog Box

Use the **Registering Your System Offline** dialog box to register a system that is not connected to the Internet.

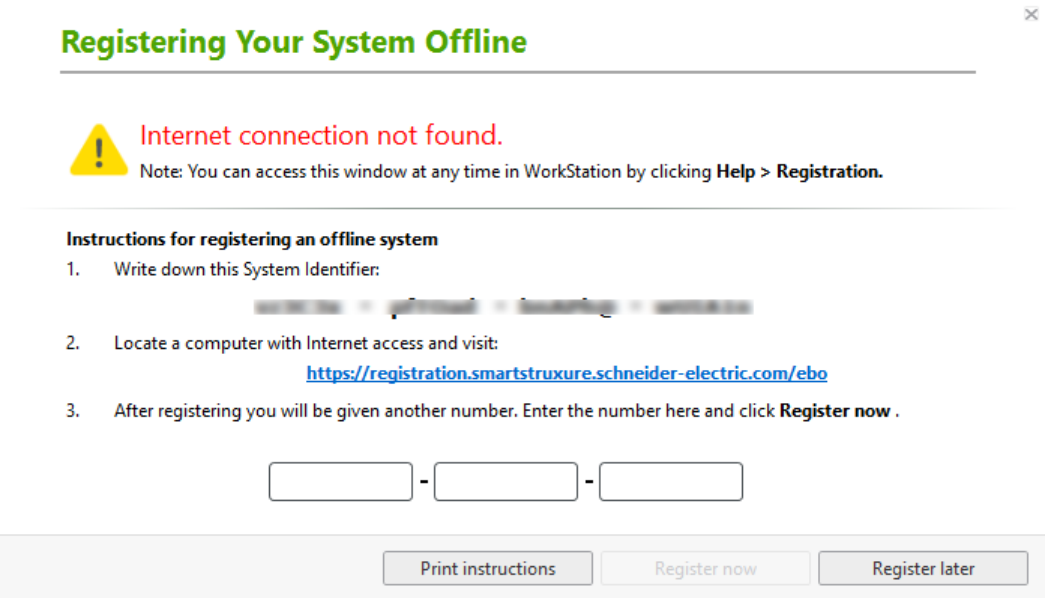


Figure – Registering your system offline dialog box

Table – Registering Your System Offline Dialog Box

Component	Description
Print instructions	Click to print the instructions for the offline registration of the EcoStruxure BMS.
Register now	Click to complete the offline registration of the EcoStruxure BMS. For more information, see section 2.5 “Offline Registration” on page 27.
Register later	Click to postpone the offline registration of the EcoStruxure BMS. For more information, see section 2.5 “Offline Registration” on page 27.

21.28 Registration Information Dialog Box for Offline System

Use the **Registration Information** dialog box to view the system identifier and the information to view the registration information of the system registered offline. You can navigate to the Schneider Electric Privacy Policy page and also edit the registration information.

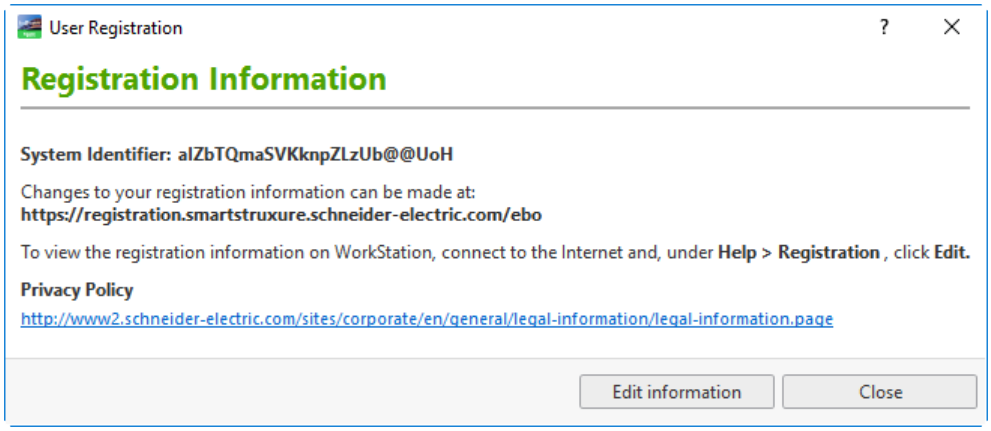


Figure – Registration Information Dialog Box

Table – Registration Information Dialog Box

Component	Description
Privacy Policy	Click to navigate to Schneider Electric Privacy Policy page.
Edit information	Click to edit your system's registration information.
Close	Click to close the window.

21.29 Registration Information Dialog Box for Online System

Use the **Registration Information** dialog box to view the system identifier. If the system has been registered online, the dialog box displays the information to whom the system is registered. If the system is connected to the Internet, you can view the Schneider Electric Privacy Policy page and also edit the registration information.

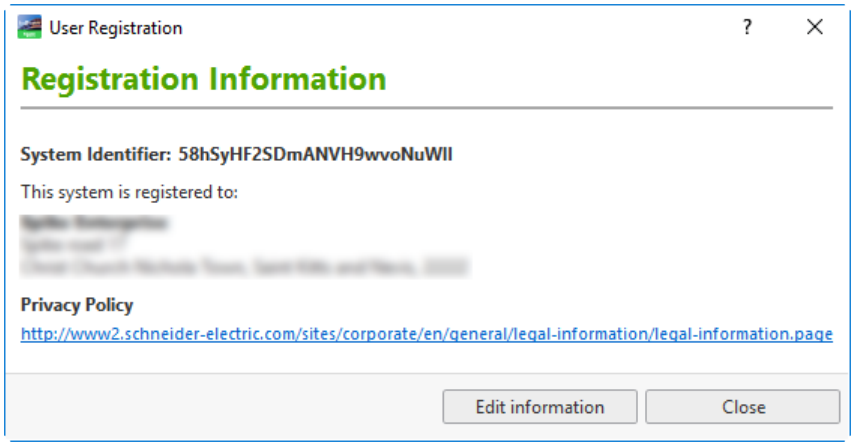


Figure – Registration Information Dialog Box

Table – Registration Information Dialog Box

Component	Description
System Identifier	Displays the System Identifier for further reference.
Registration data	Displays the registration data of the system registered online.
Privacy Policy	Click to display the Schneider Electric Privacy Policy page.
Edit information	Click to edit your system information.
Close	Click to close the dialog box.

21.30 Editing Your System Registration Offline Dialog Box

Use the **Editing Your System Registration Offline** dialog box to view and print the instructions for editing registration information of an offline system.

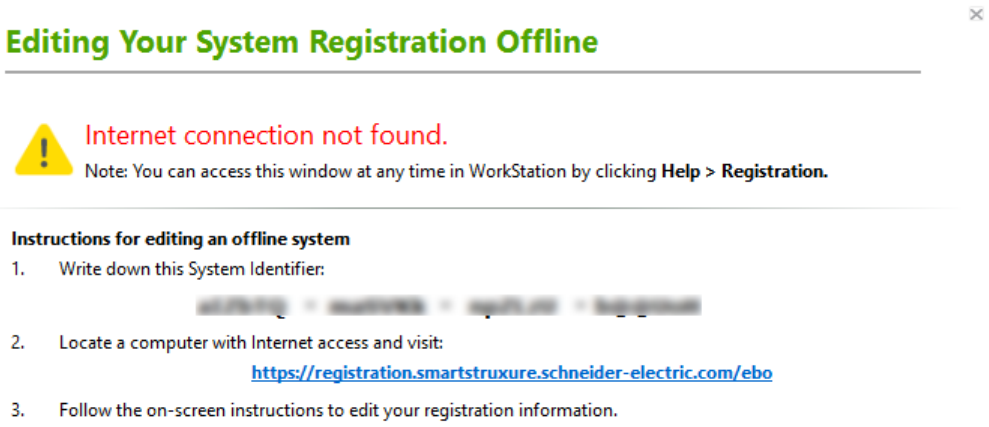


Figure – Editing your system offline window

Table – Editing Your System Offline Window

Component	Description
Print instruction	Click to print the instructions.

21.31 Installation and System Information Page

Use the **Installation and System Information** page to enter the location of your system and what type of application it is used for.

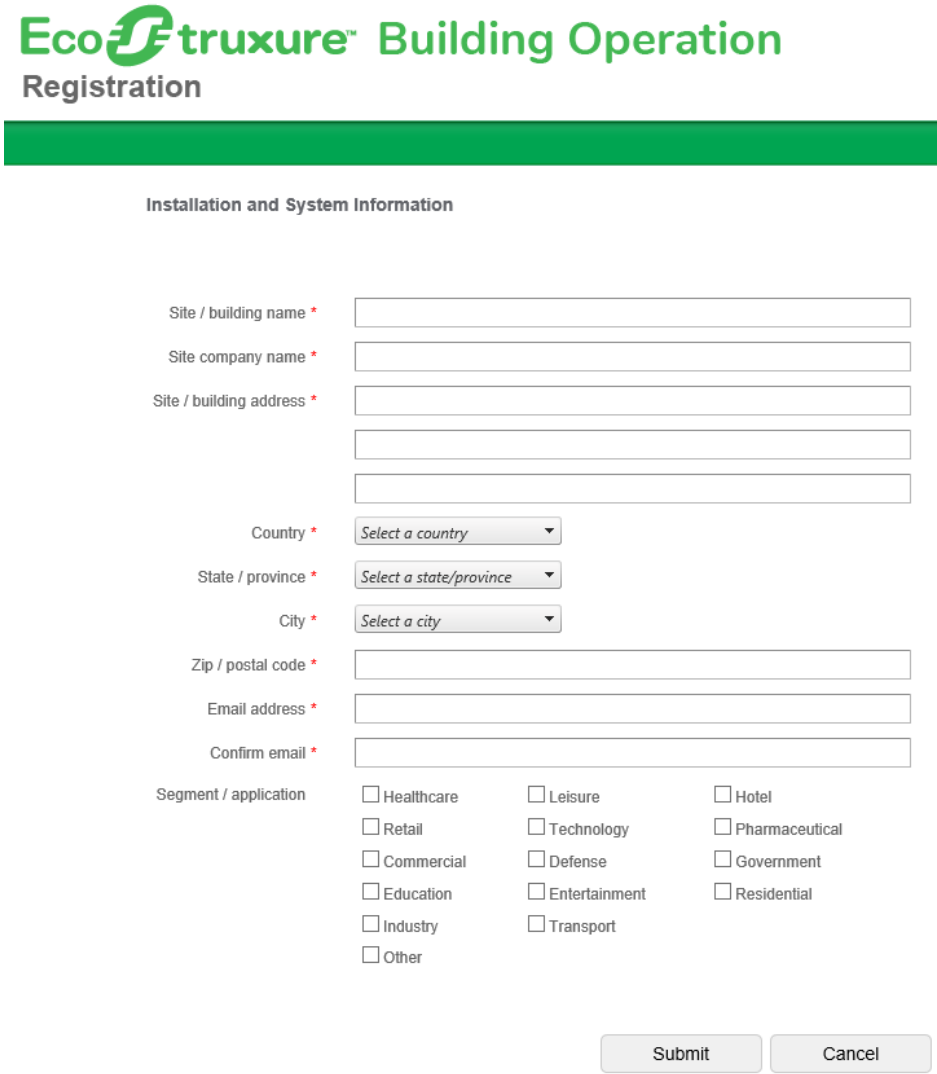


Figure – Installation and System Information page

Table – Installation and System Information Page

Property	Description
Site/building name	Type the site/building name.
Site company name	Type the company name.
Site/building address	Type the site/building address.
Country	Select the country for the site/building.
State/province	Select the state/province for the site/building.

Continued

Property	Description
City	Select the city for site/building.
Zip/postal code	Type the zip/postal code.
Email address	Type your email address.
Confirm email	Type the email address again.
Segment/application	Select the business segments you belong to.
Submit	Click to submit your system registration.
Cancel	Click to interrupt the registration process. Available for offline registrations only.

21.32 Column Row Context Menu

Use the column row context menu to manage the presentation of information in an Alarm, Event, or Watch pane or View or in the List View.

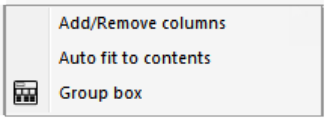


Figure – Column row context menu

Table – Column Row Context Menu

Command	Description
Add/Remove columns	Click to add or remove a column in a pane or a View. For more information, see the *Add/Remove Columns Dialog Box* topic on WebHelp.
Auto fit to contents	Click to see all, or as much as possible, of the content displayed in each of the columns. For more information, see section 8.20 “Fitting the Column Width to the Contents” on page 71.
Group box	Click to get a better overview of the objects, for example, in a folder or a list. For more information, see section 5.8 “Grouping Objects” on page 47.

21.33 Drag and Drop Context Menu

Use the drag and drop context menu to copy, move, or create shortcuts for objects selected in the **List View** or in the **System Tree** pane, and to mass create objects selected in the **List View**.

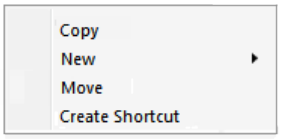


Figure – Drag and drop context menu

Table – Drag and Drop Context Menu

Command	Description
Copy	Click to copy the objects selected in the **List View** to the selected folder or object in the System Tree pane.
New	Click to open the **New** submenu where you create or mass create alarms or trends based on the selected value objects. For more information, see section 21.34 “Drag and Drop Context Menu – New Submenu” on page 243.
Move	Click to move the objects selected in the List View to the selected folder or object in the System Tree pane.
Create Shortcut	Click to create a shortcut for the objects selected in the List View to the selected folder or object in the System Tree pane.

21.34 Drag and Drop Context Menu – New Submenu

Use the **New** submenu to create new alarms or trends. By default, the alarms or trends are created in the same folder as the value they are based on.

Figure – New submenu

Table – New Submenu

Command	Description
Alarm	Select to open the Create Object wizard or the Mass Create Object wizard where you create one or several alarms. For more information, see the *Create Object Wizard – Naming the Object Page* topic on WebHelp.. For more information, see the *Mass Create Object Wizard – Name Page* topic on WebHelp.
Trend	Select to open the Create Object wizard or the Mass Create Object wizard where you create one or several trends. For more information, see the *Create Object Wizard – Naming the Object Page* topic on WebHelp.. For more information, see the *Mass Create Object Wizard – Name Page* topic on WebHelp.

21.35 Changing Value Dialog Box

Use the **Changing Value** dialog box to change or force a value using a graphic.

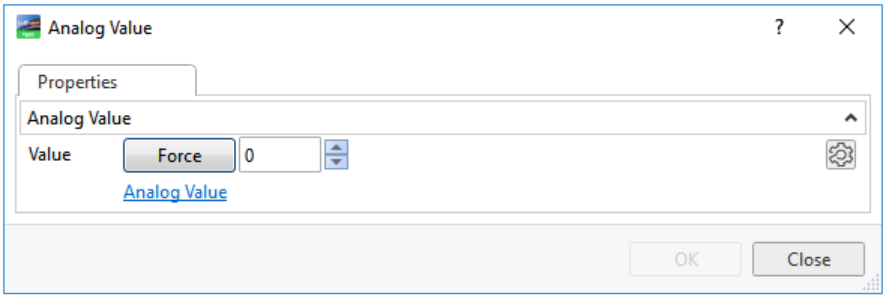


Figure – Changing value dialog box

Table – Changing Value Dialog Box

Component	Description
Value	Click to change, force or release a value.

21.36 Object Property Dialog Box

Use the object property dialog box to view or change the properties of a bound object. The link under each object opens a properties dialog box with a complete set of properties for that object.

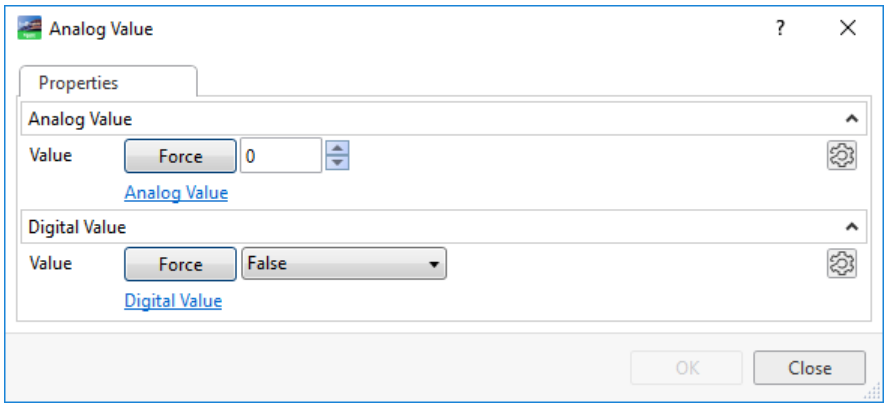


Figure – Object property dialog box

Table – Object Property Dialog Box

Component	Description
Link	Click to display the complete set of properties of the bound object.

21.37 Configure Dialog Box – Operation Tab

Use the **Operation** tab to select an object, force and release values, and to check the unforced value.

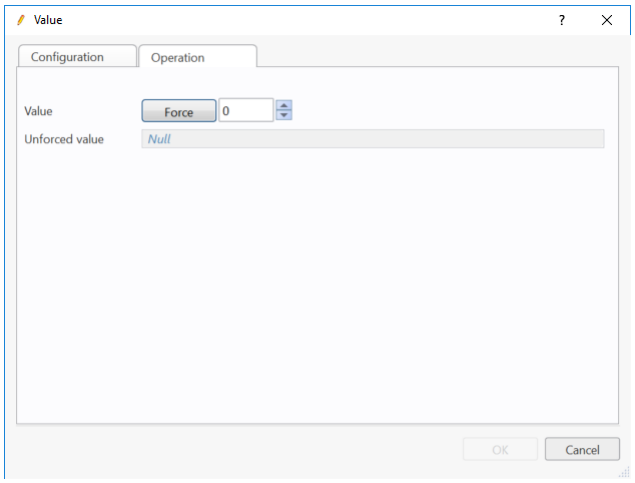


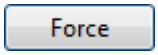
Figure – The Operation tab displaying both the forced and unforced value

Component	Description
Value	Enter the path of the object you want to select or the value that you want to use to override the value of the property.
Force	Click **Force** to force a value. For more information, see section 6.7 “Forced Values” on page 54.
Unforce	Click to release the forced value. For more information, see section 6.7 “Forced Values” on page 54.

21.38 Force and Unforce Buttons

Use the **Force** and **Unforce** buttons to force and release a value.

Table – Force and Release Buttons

Button	Description
	**Force** Displays a non-forced value. Click to force the value.
	**Unforce** Displays a forced value. Click to release the value.

21.39 Alarms Pane and Alarm View

Use the **Alarms** pane and **Alarm View** to survey and manage alarms.

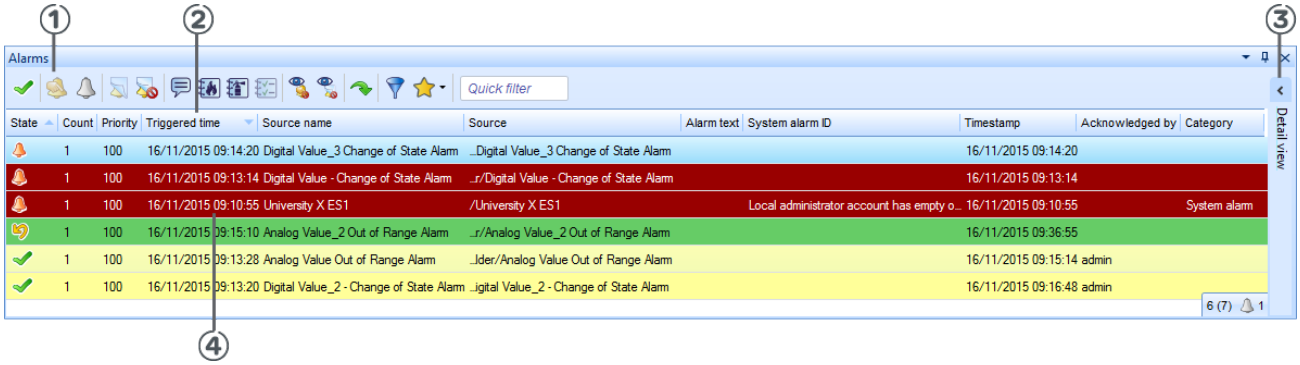


Figure – Alarms pane

Table – Alarms Pane and Alarm View

Number	Description
①	Use the toolbar to acknowledge, hide, show and comment alarms. For more information, see section 21.40 “Alarms Pane and Alarm View Toolbar” on page 249.
②	Use the columns to sort, show, and hide information about the triggered alarms. For more information, see the *Add/Remove Columns Dialog Box* topic on WebHelp.
③	Use the Detail view to get information about the selected alarm. For more information, see section 21.51 “Alarm and Event Detail View ” on page 265.
④	Use the list to get information about a triggered alarm and its current status. For more information, see the *Alarms Pane and Alarm View Icons* topic on WebHelp.

21.40 Alarms Pane and Alarm View Toolbar

Use the **Alarms** pane and **Alarm View** toolbar to manage the alarms.

Table – Alarms Pane and Alarm View Toolbar

Button	Description
	**Acknowledge** Click to acknowledge alarm state or reset state. For more information, see section 8.3 “Alarm Acknowledgements ” on page 63.
	**Enable alarm** Click to enable the alarm. If the alarm state changed, for example, from alarm state to normal state during the time the alarm was disabled, the alarm is given the new state once it is enabled. For more information, see section 10.6 “Disable and Enable Alarms” on page 77.
	**Disable alarm** Click to disable the alarm. The alarm is inactivated and cannot be acknowledged or reset until it is enabled. For more information, see section 10.6 “Disable and Enable Alarms” on page 77.
	**Unhide alarm** Click to show the alarm. For more information, see section 10.2 “Hide and Show Alarms” on page 76.
	**Hide alarm** Click to hide the alarm in the Alarms pane or Alarm View. The alarm is still logged in the Event log. For more information, see section 10.2 “Hide and Show Alarms” on page 76.
	**Add comment** Click to add a comment to the alarm. For more information, see section 9.2 “Alarm Comments” on page 73.
	**Add cause note** Click to add a cause note to the alarm. For more information, see section 9.5 “Cause Notes” on page 73.
	**Add action note** Click to add an action note to the alarm. For more information, see section 9.8 “Action Notes” on page 74.

Continued

Button	Description
	**Checklist** Click to view the checklist for the alarm. For more information, see section 9.11 “Checklists” on page 75.
	**Show disabled alarms** Click to toggle between showing and hiding disabled alarms. For more information, see section 10.6 “Disable and Enable Alarms” on page 77.
	**Show hidden alarms** Click to toggle between hiding alarms and showing hidden alarms. For more information, see section 10.2 “Hide and Show Alarms” on page 76.
	Go to alarm object Click to open the settings of the alarm in the Work Area.
	**Edit user filter** Click to select the conditions for the temporary alarm display in the Alarms pane. When you close the view, the filter conditions are lost. For more information, see the *Alarm Filters* topic on WebHelp.
	**Favorites** Click to open the **Favorites** menu where you select, add, and manage favorites.

21.41 Select Conditions Dialog Box

Use the **Select Conditions** dialog box to sort out the alarms of interest in the **Alarms** pane or an **Alarm View**, or the events in the **Events** pane or an **Event View**.

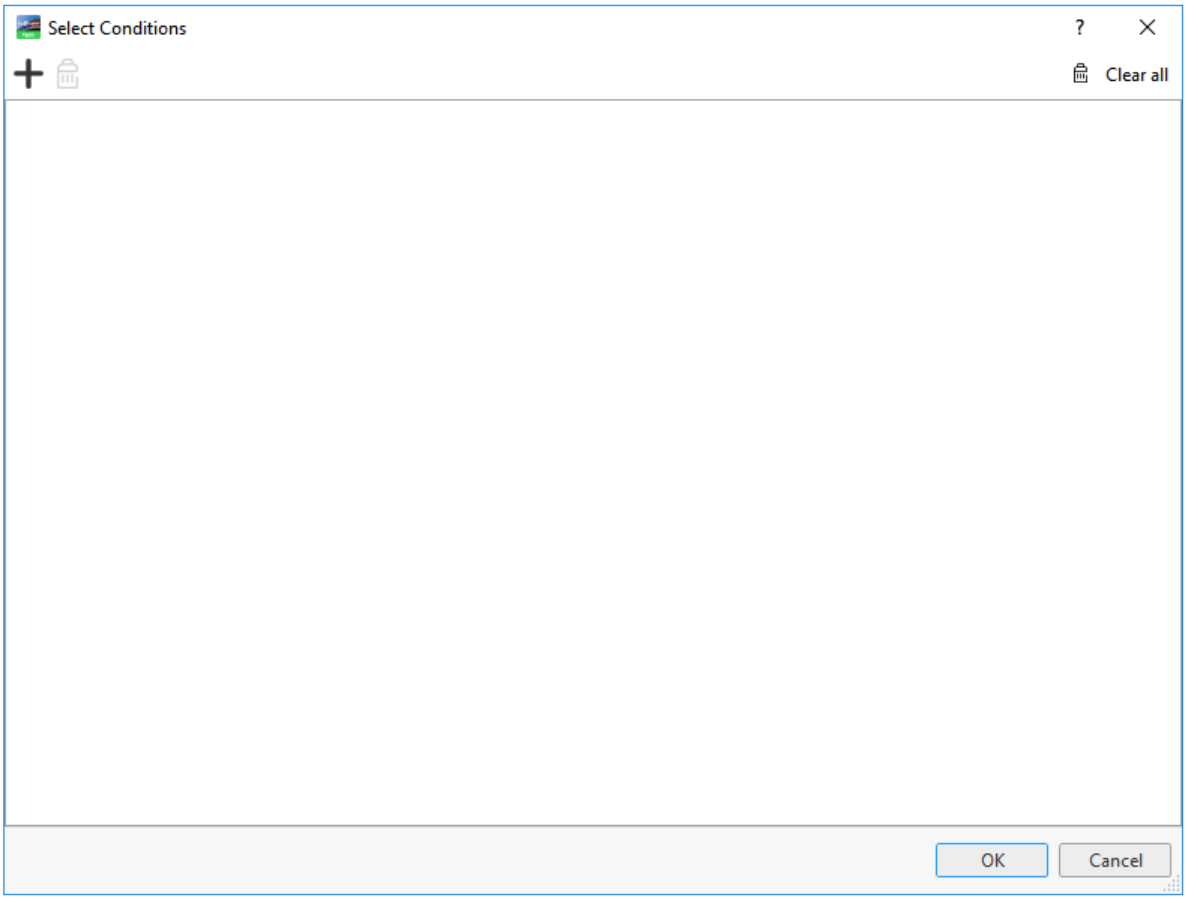


Figure – Select Conditions dialog box

Table – Select Conditions Dialog Box

Component	Description
+	**Add condition** Select the alarm filter conditions for the alarms you want to include.
🗑	**Remove condition** Remove the alarm filter conditions for the alarms you want exclude.
+	**Add row** Click to add an additional row with the same condition.
🗑	**Remove row** Click to remove a condition row.

Continued

Component	Description
Exclude	**Exclude** Click to inverse the condition in the alarm filter.
	**Clear all** Click to clear the selected conditions.

21.42 Add/Remove Conditions Dialog Box

Use the **Add/Remove Conditions** dialog box to add or remove conditions from the Alarms pane, Alarm View, Events pane, Event View, Alarm Triggered Notification View, Assignment View, or Sum Alarm View.

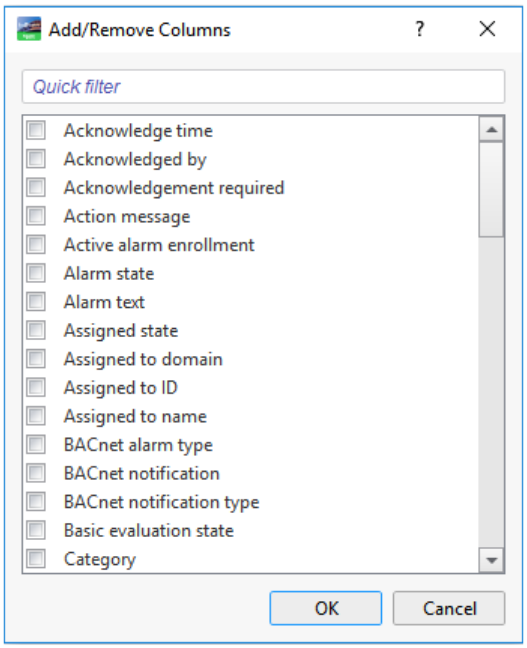


Figure – Add/Remove Conditions dialog box

21.43 Add Comment Dialog Box

Use the **Add comment** dialog box to add a comment to an alarm.

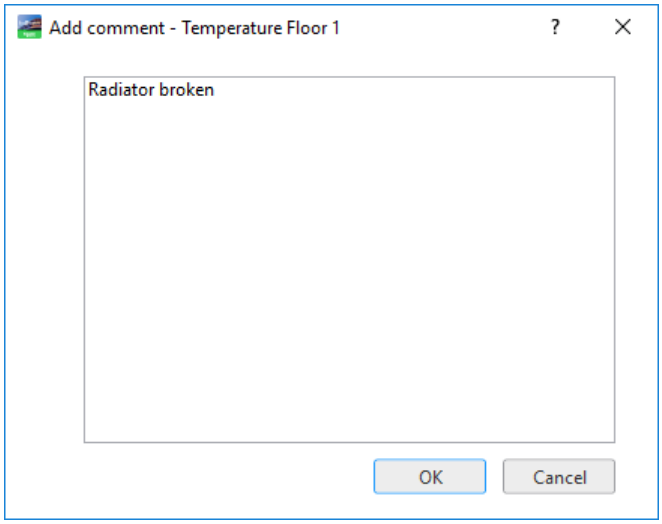


Figure – Add comment dialog box

21.44 Cause Notes Dialog Box

Use the **Cause notes** dialog box to add a cause note to an alarm.

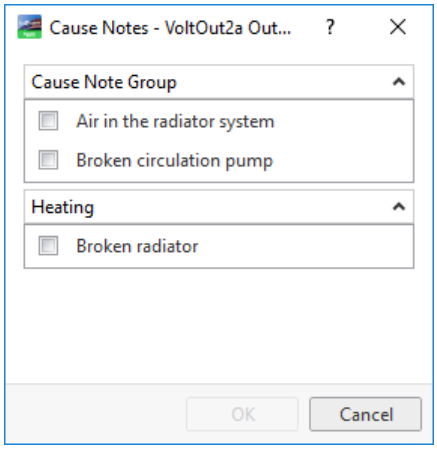


Figure – Cause notes dialog box

21.45 Action Notes Dialog Box

Use the **Action notes** dialog box to add an action note to an alarm.

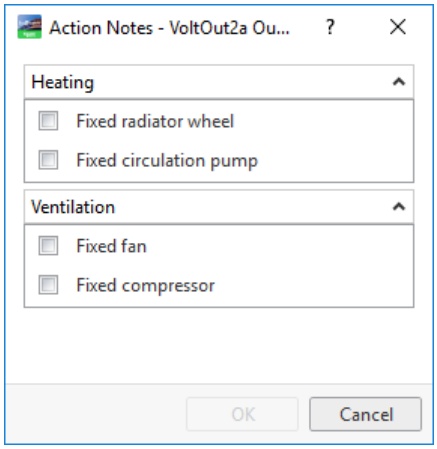


Figure – Action notes dialog box

21.46 Checklist Dialog Box

Use the **Checklist** dialog box to add a checklist to an alarm.

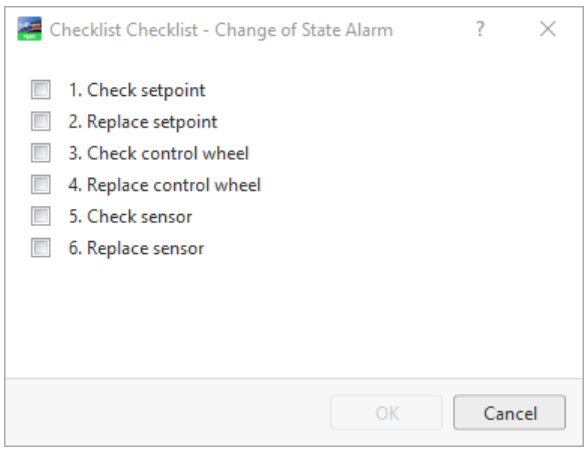


Figure – Checklist dialog box

21.47 Assign Dialog Box

Use the **Assign** dialog box to assign an alarm to a user or a user group.

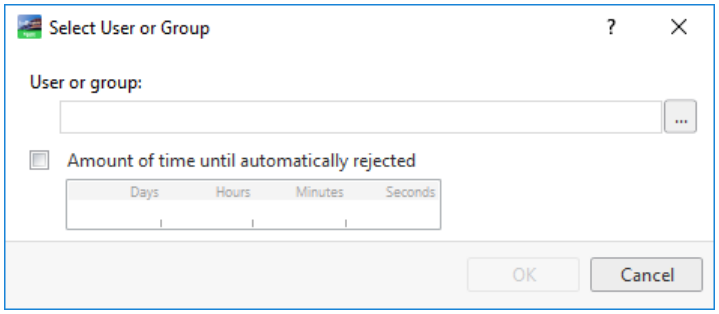


Figure – Select User or Group dialog box

Table – Select User or Group Dialog Box

Component	Description
User or group	Enter the user or user group you want to assign the alarm to.
Amount of time until automatically rejected	Select to automatically reject after a predefined time.

21.48 Alarms Pane Context Menu

Use the **Alarms pane** context menu to manage the alarms in the Alarms pane.

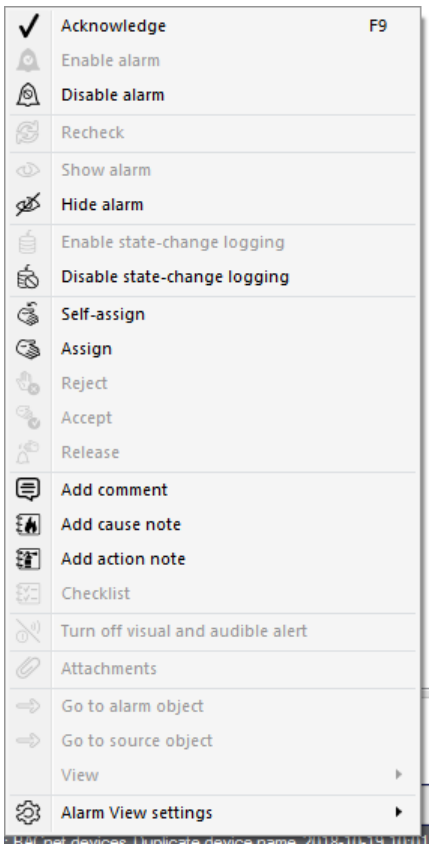


Figure – Alarms pane context menu

Table – Alarms Pane Context Menu

Command	Description
Acknowledge	Click to acknowledge the alarm state or reset state. For more information, see section 8.3 “Alarm Acknowledgements ” on page 63.
Enable alarm	Click to enable the alarm. If the alarm state changed, for example from alarm state to normal state during the time the alarm was disabled, the alarm is given the new state once it is enabled. For more information, see section 10.6 “Disable and Enable Alarms” on page 77.
Disable alarm	Click to disable the alarm. The alarm is disabled and cannot be acknowledged or reset until it is enabled. For more information, see section 10.6 “Disable and Enable Alarms” on page 77.
Recheck	Click to update the current alarm state.

Continued

Command	Description
Show alarm	Click to show the alarm. For more information, see section 10.2 “Hide and Show Alarms” on page 76.
Hide alarm	Click to hide the alarm from the Alarms pane. The alarm is still logged in the event log. For more information, see section 10.2 “Hide and Show Alarms” on page 76.
Enable state-change logging	Click to start logging an event each time the alarm is changing its state. For more information, see section 11.1 “Alarm State-Change Logging ” on page 80.
Disable state-change logging	Click to stop logging an event every time the alarm is changing its state. For more information, see section 11.1 “Alarm State-Change Logging ” on page 80.
Self-assign	Click to assign the alarm to yourself. For more information, see section 8.5 “Alarm Assignments” on page 63.
Assign	Click to assign the alarm to another user. For more information, see section 8.5 “Alarm Assignments” on page 63.
Reject	Click to reject the alarm. For more information, see section 8.5 “Alarm Assignments” on page 63.
Accept	Click to accept the alarm. For more information, see section 8.5 “Alarm Assignments” on page 63.
Release	Click to release an alarm that is assigned to you. For more information, see section 8.5 “Alarm Assignments” on page 63.
Add comment	Click to add a comment to the alarm. For more information, see section 9.2 “Alarm Comments” on page 73.
Add cause note	Click to add a cause note to the alarm. For more information, see section 9.5 “Cause Notes” on page 73.
Add action note	Click to add an action note to the alarm. For more information, see section 9.8 “Action Notes” on page 74.
Checklist	Click to view the checklist of the alarm. For more information, see section 9.11 “Checklists” on page 75.
Turn off visual and audible alert	Click to turn off visual and audible alert.

Continued

Command	Description
Attachments	Click to open the file or document that is attached to the alarm. For more information, see section 8.11 “Alarm Attachments” on page 66.
Go to alarm object	Click to open the settings of the alarm in the Work area.
Go to source object	Click to open the object that triggered the alarm in the Work area.
View	Click to view the history, comments, cause notes, action notes, or checklists of an alarm in the work area. For more information, see section 21.49 “Alarms Pane Context Menu - View Submenu” on page 262.
Alarm View settings	Click to open the Alarm View settings submenu where you can make a number of Alarm View settings for the current Alarms pane or Alarm View. For more information, see section 21.50 “Alarms Pane Context Menu - Alarm View Settings Submenu” on page 263.

21.49 Alarms Pane Context Menu - View Submenu

Use the **View** submenu to view the history, comments, cause notes, action notes, or checklists of an alarm.

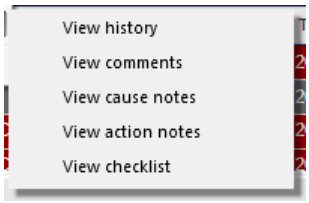


Figure – View submenu

Table – View Submenu

Command	Description
View history	Click to display the historical events of the alarm. For more information, see section 21.57 “Events Pane and Event View” on page 271.
View comments	Click to display comments linked to the alarm. For more information, see section 9.2 “Alarm Comments” on page 73.
View cause notes	Click to display cause notes linked to the alarm. For more information, see the *Cause Notes* topic on WebHelp.
View action notes	Click to display action notes linked to the alarm. For more information, see the *Action Notes* topic on WebHelp.
View checklist	Click to display checklists linked to the alarm. For more information, see the *Checklists* topic on WebHelp.

21.50 Alarms Pane Context Menu - Alarm View Settings Submenu

Use the **Alarm View Settings** submenu to change the way alarms are presented.

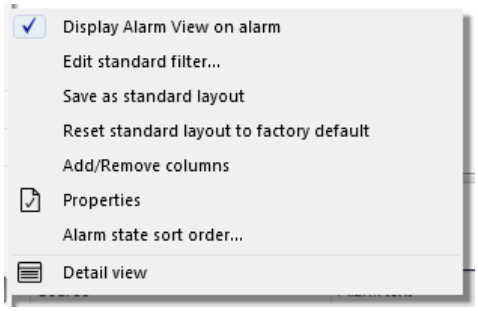


Figure – Alarm View settings submenu

Table – Alarm View Settings Submenu

Command	Description
Display Alarm View on alarm	Click to display an Alarm View in a new window when an alarm is triggered. For more information, see the *Displaying an Alarm View when an Alarm is Triggered* topic on WebHelp.
Edit standard filter	Click to open the **Select Conditions** dialog box, where you sort out the information in the Alarms pane or an Alarm View. For more information, see section 21.41 “Select Conditions Dialog Box” on page 251.
Save as standard layout	Click to save the current Alarms pane or Alarm View layout as the standard layout for all users and for the Alarms pane or the specific Alarm View.
Reset standard layout to factory default	Click to reset the Alarms pane or Alarm View standard layout to factory default.
Add/Remove columns	Click to open the **Add/Remove columns** dialog box to add or remove columns from the Alarms pane or Alarm View. For more information, see the *Add/Remove Columns Dialog Box* topic on WebHelp.
Properties	Click to open the **Alarm View properties** dialog box to view and edit the properties of the Alarms pane or Alarm View. For more information, see the *Alarm View Properties* topic on WebHelp.
Alarm state sort order	Click to open the **Alarm state sort order** dialog box to determine how alarms will be sorted when the column **State** is used for sorting the alarms in the Alarms pane or an Alarm View. For more information, see section 5.6 “Changing the Alarm State Sort Order” on page 45.

Continued

Command	Description
Detail view	Click to open a detailed view for the selected alarm. For more information, see section 21.51 “Alarm and Event Detail View ” on page 265.

21.51 Alarm and Event Detail View

Use the **Detail view** to view all properties of a selected alarm or event.

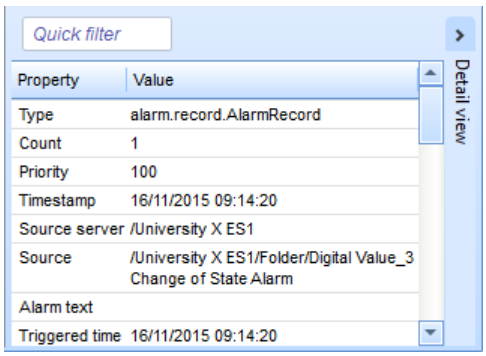


Figure – Detail view (here, in the Alarms pane)

Table – Alarm and Event Detail View

Component	Description
Quick filter	Enter a word or a character to filter on. For more information, see section 5.11 “Quick Filter ” on page 49.
Property	Displays all possible columns of the selected alarm or event.
Value	Displays the value.

21.52 Alarm State Sort Order Dialog Box

Use the **Alarm State Sort Order** dialog box to change the order in which alarms of different states are displayed in the Alarms pane or the Alarm Views in the EcoStruxure Building Operation software.

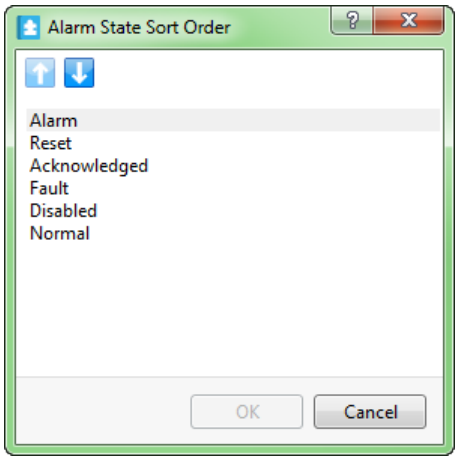


Figure – Alarm State Sort Order dialog box

Table – Alarm State Sort Order Dialog Box

Component	Description
	Click to move the selected alarm state up.
	Click to move the selected alarm state down.

21.53 Favorites Menu

Use the **Favorites** menu to apply, add, or manage **Alarms** pane, **Events** pane, **Alarm View**, **Event View** layout and filter conditions, or **List View** layout.

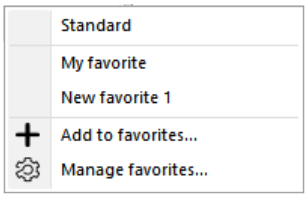


Figure – Favorites menu

Table – Favorites Menu

Command	Description
Standard	Click to return to the Standard layout and filter conditions.
Favorite name	Click to apply the favorite selected in the list. For more information, see section 8.15 “Favorites” on page 68.
Add to favorites	Click to open the **Save Favorite** dialog box where you save the current pane or view layout and filter conditions. For more information, see section 21.55 “Save Favorite Dialog Box” on page 269.
Manage favorites	Click to open the **Manage Favorites** dialog box where you edit the favorite name or delete a favorite. For more information, see section 21.54 “Manage Favorites Dialog Box” on page 268.

21.54 Manage Favorites Dialog Box

Use the **Manage Favorites** dialog box to open the **Edit Favorite** dialog box where you edit a favorite name or to delete a favorite from the list of favorites.

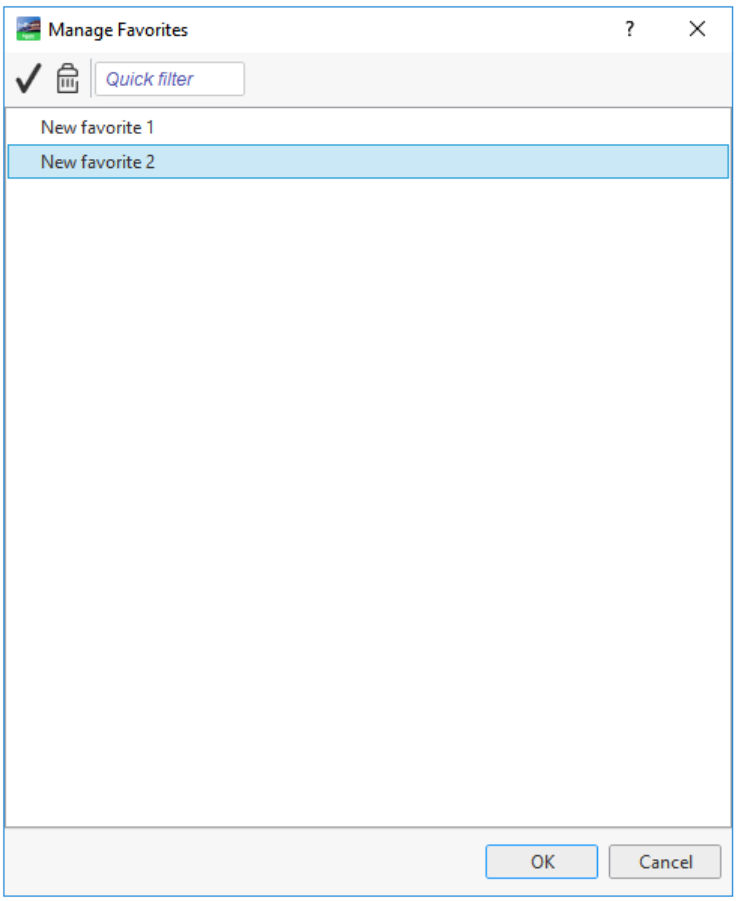


Figure – Manage Favorites dialog box

Table – Manage Favorites Dialog Box

Component	Description
	**Delete** Click to delete a selected favorite from **Favorites**.
[Quick filter]	Enter a favorite name or a part of a favorite name to limit the number of displayed favorites in the list. For more information, see section 5.11 “Quick Filter ” on page 49.

21.55 Save Favorite Dialog Box

Use the **Save Favorite** dialog box to save a new Alarms pane, Events pane, Alarm View, or Event View favorite layout and filter conditions, or to overwrite an existing pane or View layout and filter conditions by saving it under an existing name.

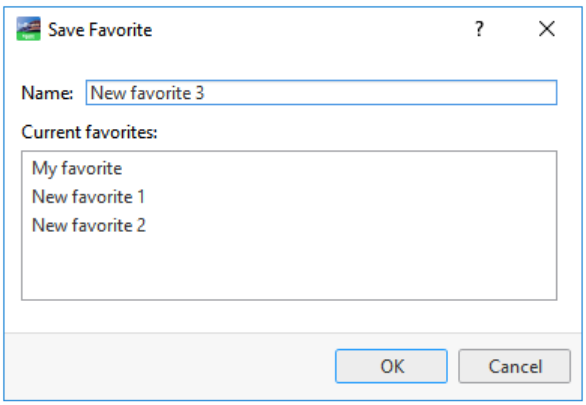


Figure – Save Favorite dialog box

Table – Save Favorite Dialog Box

Component	Description
Name	Type a name for the new favorite.
Current favorites	Select an existing favorite from the list.

21.56 Edit Favorite Dialog Box

Use the **Edit Favorite** dialog box to rename a favorite.

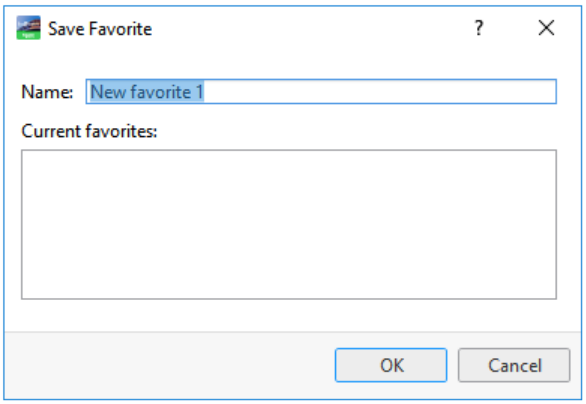


Figure – Edit Favorite dialog box

Table – Edit Favorite Dialog Box

Component	Description
Name	Type a new name for the favorite.

21.57 Events Pane and Event View

Use the **Events pane** and **Event Views** to view system or individual point events.

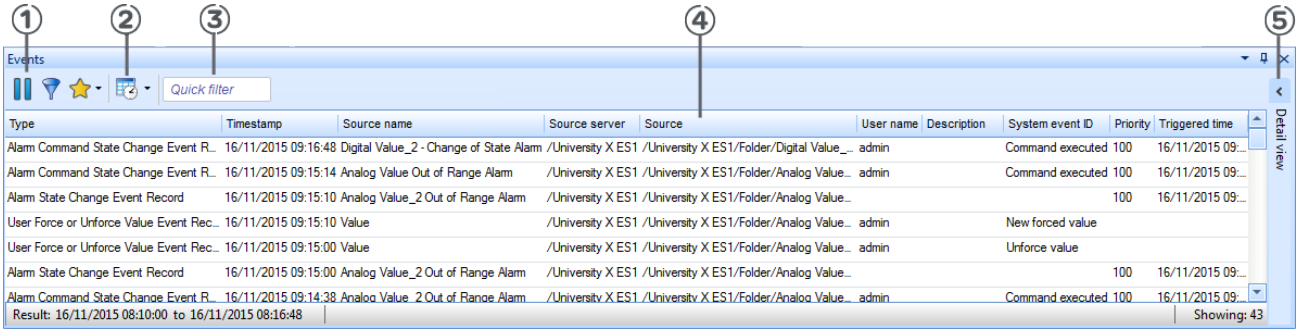


Figure – Events pane

Table – Events Pane and Event View

Number	Description
①	Use the paus/play button to pause or resume showing new events. For more information, see section 21.58 “Events Pane and Event View Toolbar” on page 272.
②	Click to open the period selector where you select the time and date period for the events you want to display.
③	Use the Quick filter to enter a word to filter on. For more information, see section 5.11 “Quick Filter ” on page 49.
④	Use the columns to sort, hide, or show information about the events. For more information, see the *Add/Remove Columns Dialog Box* topic on WebHelp.
⑤	Use the Detail view to display all information about a selected event.

21.58 Events Pane and Event View Toolbar

Use the **Events** pane and **Event View** toolbar to manage the events.

Table – Events Pane and Event View Toolbar

Button	Description
	Click to stop showing new events.
	Click to start showing new events.
	**Event filter** Click to select the conditions for the event display. For more information, see section 21.41 “Select Conditions Dialog Box” on page 251.
	**Favorites** Click to open the **Favorites** menu where you select, add, and manage favorites.
	Click to open the period selector where you select the time and date period for the events you want to display.
Quick filter	Enter a word or a character to filter on. For more information, see section 5.11 “Quick Filter ” on page 49.

21.59 Events Pane Context Menu

Use the Events pane context menu to pause or resume the reading of events and to access the Event View settings.

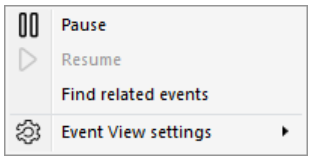


Figure – Events pane context menu

Table – Events Pane Context Menu

Command	Description
Pause	Click to pause the reading of events.
Resume	Click to resume the reading of events.
Find related events	Click to find events related to an event that occurred on an object that uses Change Control. For more information, see the *Change Control* topic on WebHelp.
Event View settings	Click to open the Event View Settings submenu where you can make a number of Event View settings for the current Events pane or Event View. For more information, see section 21.60 “Events Pane Context Menu - Event View Settings Submenu” on page 274.

21.60 Events Pane Context Menu - Event View Settings Submenu

Use the **Event View settings** submenu to change the way events are presented.

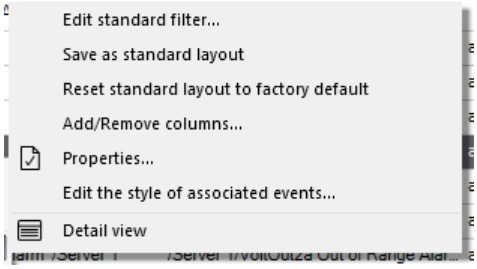


Figure – Event View settings submenu

Table – Event View Settings submenu

Command	Description
Edit event filter	Click to open the **Select conditions** dialog box where you sort the information in the Events pane or an Event View. For more information, see section 21.41 “Select Conditions Dialog Box” on page 251.
Save as standard layout	Click to save the current Events pane or Event View layout as the standard layout for all users and for the Events pane or the specific Event View.
Reset standard layout to factory default	Click to reset the Events pane or Event View standard layout to factory default.
Add/Remove columns	Click to open the **Add/Remove columns** dialog box to add or remove columns from the Events pane or Event View. For more information, see the *Add/Remove Columns Dialog Box (Events)* topic on WebHelp.
Properties	Click to open the **Event View** dialog box to view and edit the properties of the Events pane or Event View. For more information, see the *Event View Properties* topic on WebHelp.
Edit the style of associated events	Click to open the Event Styles dialog box where you edit the style of a certain event. For more information, see the *Event Styles Dialog Box* topic on WebHelp.
Detail view	Click to open a detail view for the selected event. For more information, see section 21.51 “Alarm and Event Detail View ” on page 265.

21.61 Trend Chart View

Use the **Trend Chart** view to graphically display trend log records and events.

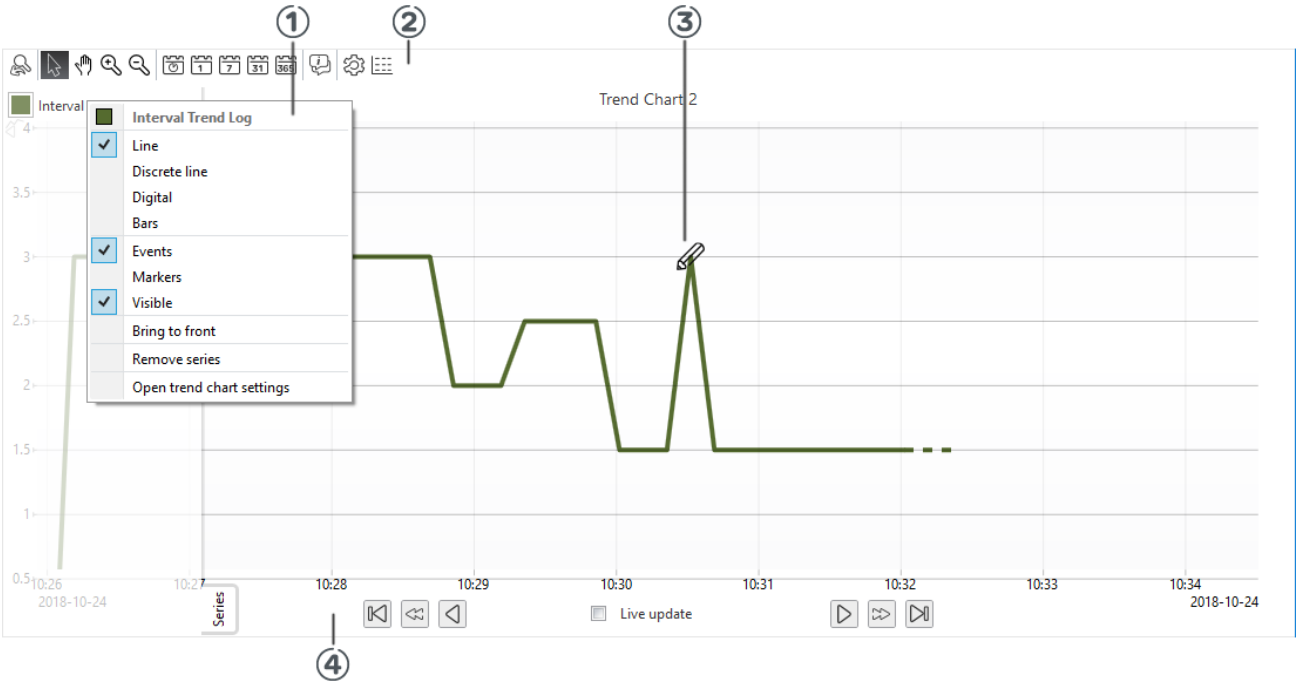


Figure – Trend chart view

Table – Trend Chart View

Number	Description
①	Use the **Series** tab shortcut menu to manage the appearance of a trend log series. For more information, see the *Series Tab Context Menu* topic on WebHelp.
②	Use the trend chart toolbar to adjust the visible trend chart area. For more information, see section 21.62 “Trend Chart Toolbar” on page 276.
③	Use the trend log event icons to get information about a specific record. For more information, see section 21.63 “Trend Chart Event Icons” on page 278.
④	Use the navigation bar to horizontally adjust the visible trend chart area. For more information, see section 21.64 “Trend Chart Navigation Bar” on page 281.

21.62 Trend Chart Toolbar

Use the **Trend Chart** toolbar to manage the trend chart and its series.

Table – Trend Chart Toolbar

Button	Description
	**Reset zoom** Click to reset the trend chart to its original size in the database.
	**Pointer** Click to point to log records in the trend chart or to scroll vertically with the mouse wheel.
	**Scroll trend chart vertical** Click to activate vertical scroll. Drag the chart area upwards or downwards to scroll the y-axis vertically.
	**Zoom in** Click to increase the scale of the trend chart or drag to magnify an area in the trend chart.
	**Zoom out** Click to decrease the scale of the trend chart.
	**Show one hour** Click to set the scale of the x-axis to one hour.
	**Show one day** Click to set the scale of the x-axis to one day.
	**Show one week** Click to set the scale of the x-axis to one week.
	**Show one month** Click to set the scale of the x-axis to one month.
	**Show one year** Click to set the scale of the x-axis to one year.
	**Show nearest information on every series** Click to show values of every trend chart series at a specific time.
	**Show events** Click to display or hide the events.

Continued

Button	Description
	**Open trend chart settings** Opens the **Trend chart settings** dialog box for the trend chart where you can configure the trend chart series, axes, and calculations. For more information, see the *Trend Chart Settings Dialog Box – Axes Tab* topic on WebHelp. For more information, see the *Trend Chart Settings Dialog Box – X Axis Tab* topic on WebHelp.
	**View in multi trend log list** Opens the trend chart in a multi trend log list. For more information, see the *Multi Trend Log List View* topic on WebHelp.

21.63 Trend Chart Event Icons

Use the Trend Chart event icons to get information on different trend log events.

Table – Trend chart event icons

Icon	Description
	**Log was started** Indicates that the trend log started recording values.
	**Log was stopped** Indicates that the trend log stopped recording values.
	**The log is not configured** Indicates that the trend log is not correctly configured or preferences are missing, so the trend log cannot start recording values.
	**A log value was missed** Indicates that one or more records were missed due to interrupted communication, hardware failure, or software failure.
	**The log configuration was updated** Indicates that the settings of the trend log were updated. The change is described in the ToolTip of the event.
	**Record was added** Indicates that a record was manually added. The new value is described in the event ToolTip.
	**Record was edited** Indicates that a record was manually edited. The change is described in the ToolTip of the event.
	**Record was added and commented** Indicates that a record was manually added and commented. The new value and comment are described in the ToolTip of the event.
	**Record was edited and commented** Indicates that a record was manually edited and commented. The changes are described in the ToolTip of the event.
	**Record was commented** Indicates that a record was commented. The comment is shown in the ToolTip of the event.
	**Log was cleared** Indicates that a trend log was cleared.

Continued

Icon	Description
	**Meter was changed** Indicates that the meter was changed or that the settings were configured. This icon only applies to the meter trend log.
	**Values exist outside the viewable area** Indicates that values exist before the values displayed in the trend chart area.
	**Values exist outside the viewable area** Indicates that values exist after the values displayed in the trend chart area.
INF	**INF value was logged** Indicates that a positive Infinity value was logged.
-INF	**-INF value was logged** Indicates that a negative Infinity value was logged.
NaN	**NaN value was logged** Indicates that an unknown value ("Not a Number") was logged.
NULL	**Null value was logged** Indicates that a Null value was logged.
	**System clock changed** Indicates that the system date and time of the EcoStruxure BMS server where the trend log is located has been changed. For more information, see the *Time and Time Zone* topic on WebHelp.
	Override Indicates that the recorded value is overridden by the hardware and is not the measured value. For more information, see the *Output Override Status* topic on WebHelp. **Forced** Indicates that the recorded value is forced by the software and is not the measured value. For more information, see the *Forced I/O Point Values* topic on WebHelp.
	**Log database restored** Indicates that the log database has been restored and that, when the log restarts, there can be a time gap in the log series.
	**Log reset by extended log** Indicates that the log has been cleared by the extended trend log due to a log database restore.

Continued

Icon	Description
	**Transfer was missed** Indicates that the extended trend log has miss records between fetches. That is, the monitored log has created and lost records before the extended trend log has been able to fetch the records.

21.64 Trend Chart Navigation Bar

Use the **Trend Chart** navigation bar to horizontally scroll the trend chart.

Table – Trend Chart Navigation Bar

Component	Description
	**Log start** Click to scroll back to the first value of the trend chart in WorkStation.
	**Fast backward** Click to scroll fast backward.
	**Backward** Click to scroll back.
Live update	Select to have the trend chart automatically adjust itself according to the latest trend log record in WorkStation.
	**Forward** Click to scroll forward.
	**Fast forward** Click to scroll fast forward.
	**Current time** Click to scroll forward to the latest value of the trend chart in WorkStation.

21.65 Schedule Editor – Basic View

Use the **Basic** view to create weekly and exception events for a schedule.

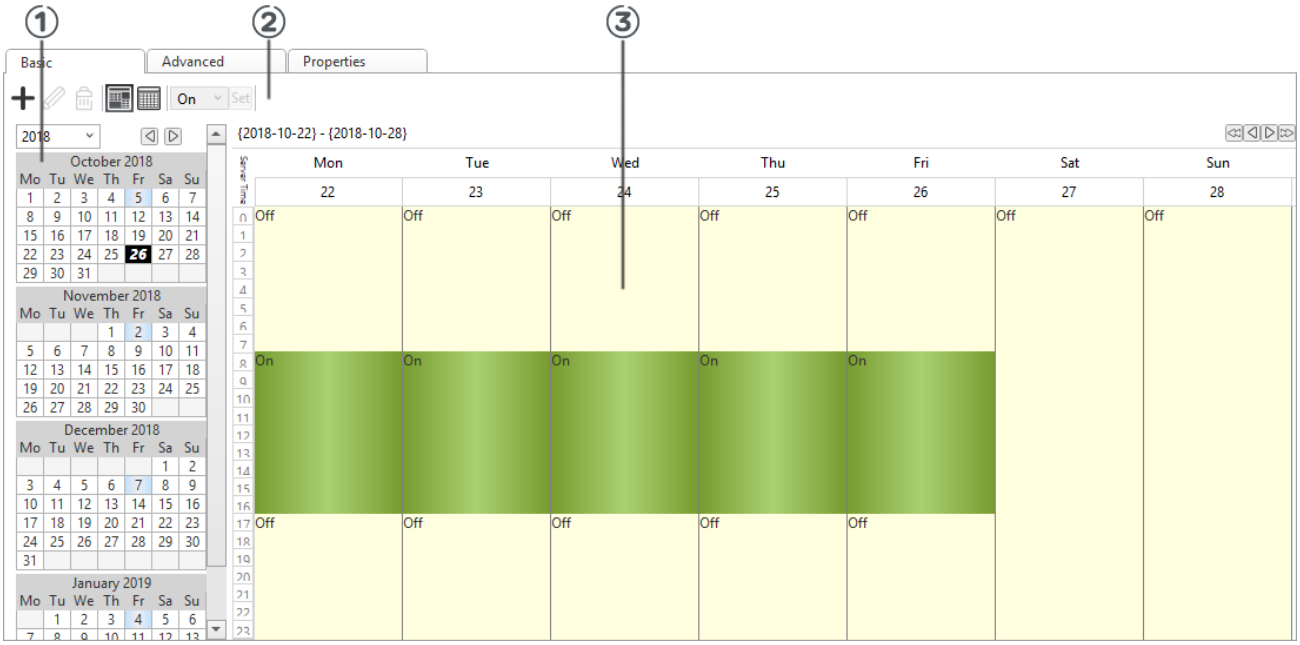


Figure – Basic Schedule Editor

Table – Basic Schedule Editor

Number	Description
①	**Calendar view** Displays the calendar with exception events in blue. For more information, see section 16.2 “Basic View of the Schedule Editor” on page 152.
②	**Basic View toolbar** Displays the toolbar to manage schedules. For more information, see section 21.66 “Basic Schedule Editor Toolbar ” on page 283.
③	**Event grid** Displays weekly and exception events in **Graphic** view. An **Unable to display events** error message displays when there is any scheduled event (weekly or exception) less than 5 minutes in length on a particular day. To view or change this scheduled event, use the **Text** view in the Advanced Tab. For more information, see the *Modifying a Schedule Using the Text View* topic on WebHelp.

21.66 Basic Schedule Editor Toolbar

Use the **Basic Schedule Editor** toolbar to manage schedules.

Table – Basic Schedule Editor Toolbar

Button	Description
	**New schedule event** Click to create a new schedule event.
	**Edit schedule events** Click to edit a selected event.
	**Delete** Click to delete events in the schedule.
	**View all schedule events** Click to display weekly and exception events for the selected week.
	**View weekly schedule events** Click to display weekly events.

21.67 Edit Exception Dialog Box

Use the **Edit Exception** dialog box to add or edit an exception event in the Advanced Schedule Editor.

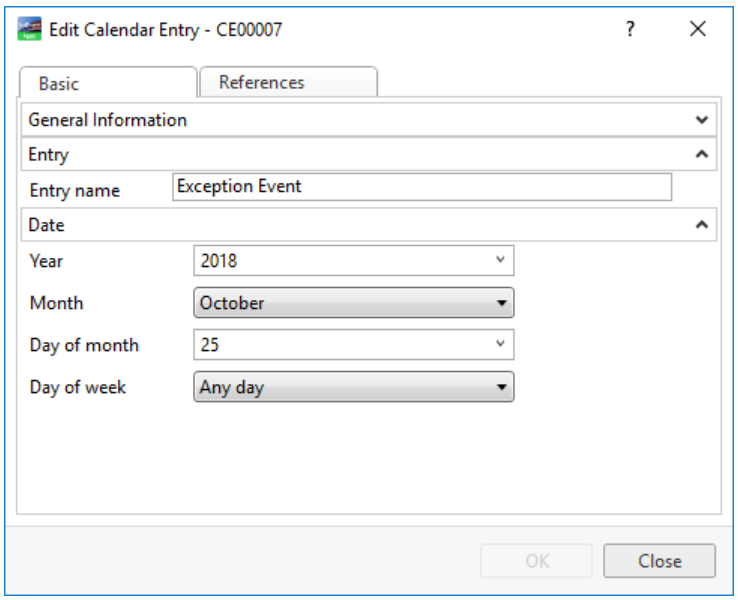


Figure – Edit Exception dialog box

Table – Edit Exception Dialog Box

Component	Description
Exception name	Type a name for the exception event.
Exception priority	Select a priority for the exception event. Valid values are from 1-16, 1 being the highest priority.
Period type	Select a time category to associate with the schedule event.
Period object	Enter the event associated with the period type.

21.68 Analog Schedule Properties – Basic Tab

Use the **Basic** tab to view the schedule status information and to configure the schedule.

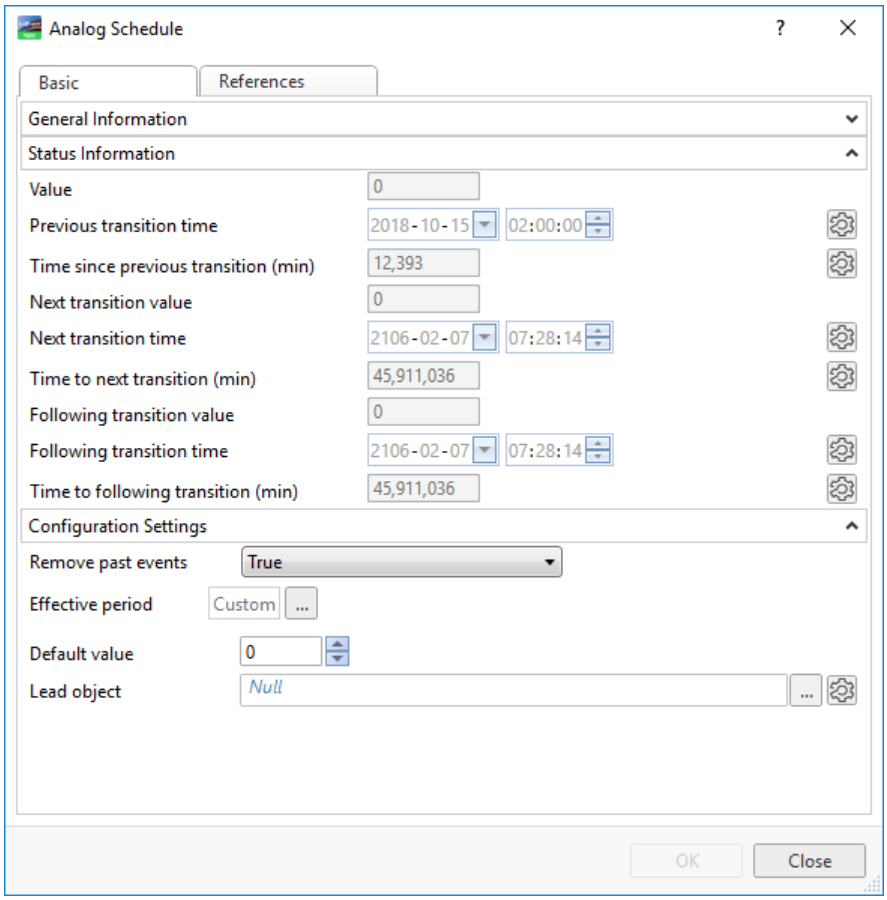


Figure – Analog Schedule properties – Basic tab

Table – Analog Schedule Properties – Basic Tab

Component	Description
Value	Select the value associated with the event.
Previous transition time	Displays the date and time the value most recently changed.
Time since previous transition (min)	Displays the amount of time in minutes that has elapsed since the value last changed, rounded to the next minute.
Next transition value[a]	Displays what the **Value** property will be when it next changes.
Next transition time[a]	Displays the date and time the value will change.
Time to next transition (min)[a]	Displays the amount of time in minutes before the value changes.

Continued

Component	Description
Following transition value[a]	Displays the subsequent value following the next transition value.
Following transition time[a]	Displays the subsequent date and time following the next transition time.
Time to following transition (min)[a]	Displays the amount of time in minutes before the value changes to the following transition value.
Remove past events	Select **True** to enable the system to delete events older than 72 hours.
Effective period	Enter the range of time a schedule is in service.
Default value	Select the value of the schedule when there are no events in effect.
Lead object	Select a lead schedule to reference.

a) The schedule only looks 8 days into the future to obtain this value. If there is no transition in the next 8 days, the maximum date and time will be displayed.

21.69 Schedule Event Properties Dialog Box – Weekly View

Use the **Weekly View** in the **Schedule Event Properties** dialog box in the Basic Schedule Editor to create a new weekly event for an existing schedule.

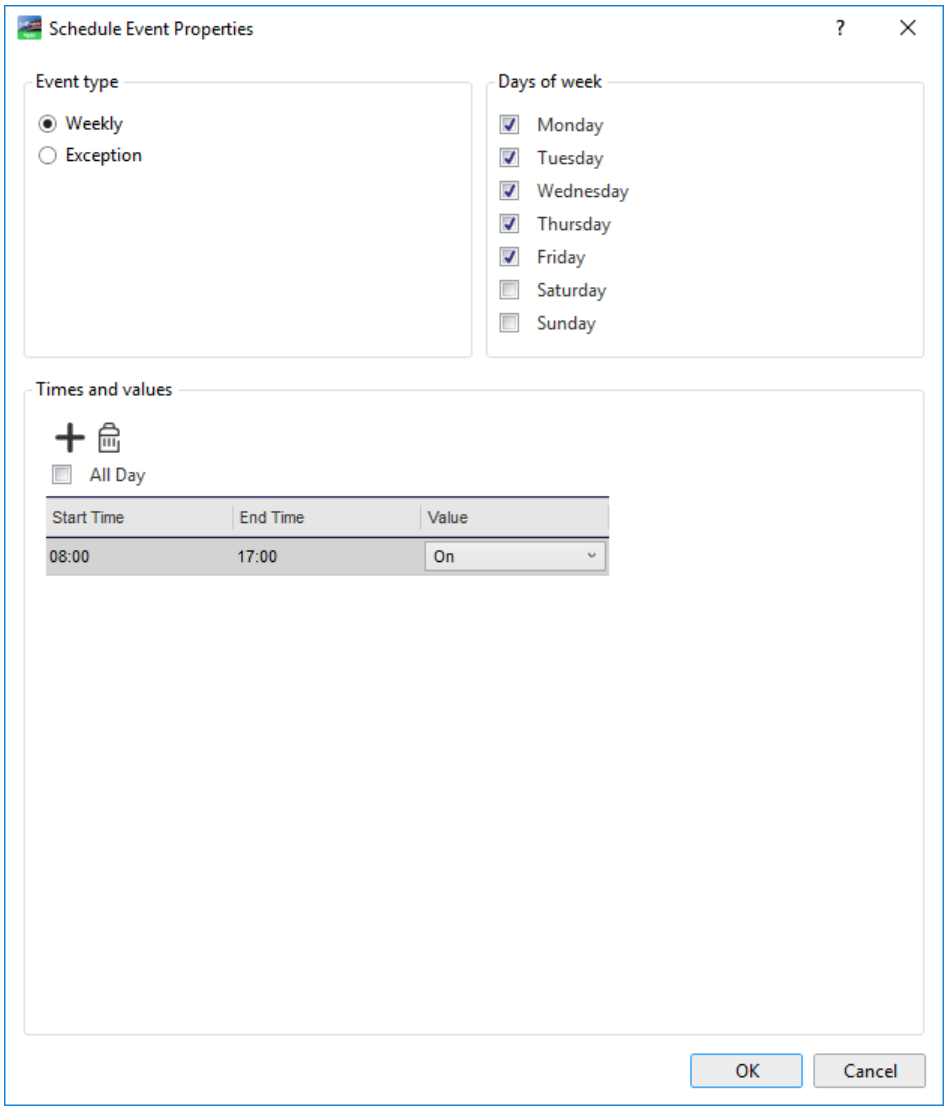


Figure – Schedule Event Properties dialog box - weekly view

Table – Schedule Event Properties Dialog Box – Weekly View

Component	Description
Event type	Click **Weekly** to select a weekly event type.
Days of week	Select the days of the week that apply to this schedule.
+	Click to add a line to the **Times and values** box.
🗑	Click to delete an entry from the **Times and values** box.

Continued

Component	Description
All day	Select to create an all day event.

21.70 Schedule Event Properties Dialog Box – Single Date Exception View

Use the **Single Date Exception view** in the **Schedule Event Properties** dialog box to schedule a single date exception.

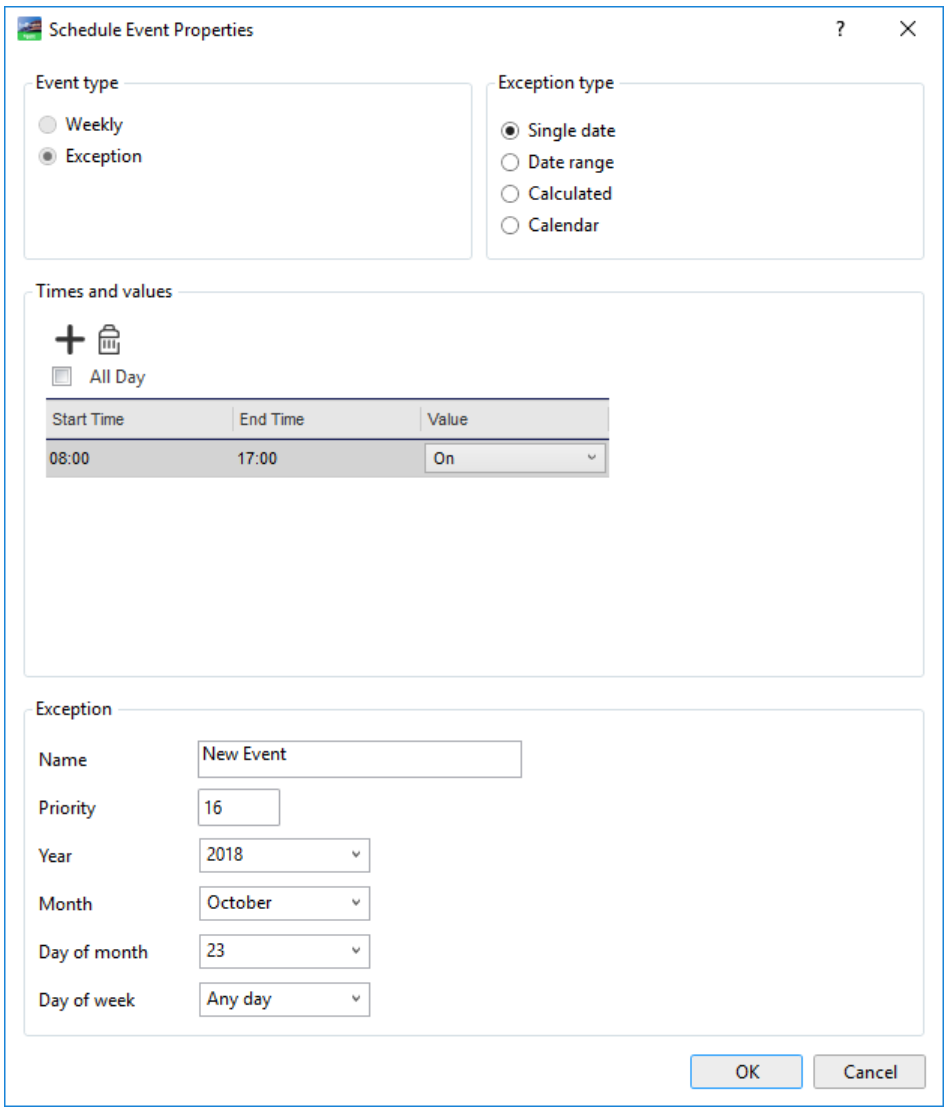


Figure – Schedule Event Properties dialog box - Single date exception view

Table – Schedule Event Properties Dialog Box – Single Date Exception View

Component	Description
Event type	Click **Exception** to display the exception types.
Exception type	Select **Single date** for the exception type to apply to the schedule.
+	Click to add a line to the **Times and values** box.

Continued

Component	Description
	Click to delete an entry from the **Times and values** box.
All Day	Select to create an all day event.
Name	Type a name for the exception event.
Priority	Select a priority number between 1 (highest priority) and 16 (lowest priority).
Year	Select a year. You can use **Any year** as a valid entry.
Month	Select a month for the exception event or **Odd month**, **Even month**, **Any month**.
Day of month	Select a value for the day of the month. You can use **Any Day**, **Last day**, **Odd days** or **Even days** as valid entries.
Day of week	Select a day of the week. Setting the value to **Any Day** ensures consistency with the rest of the date specification, this is the recommended setting.

21.71 Schedule Event Properties Dialog Box – Date Range Exception View

Use the **Date Range Exception view** in the **Schedule Event Properties** dialog box to schedule a date range exception.

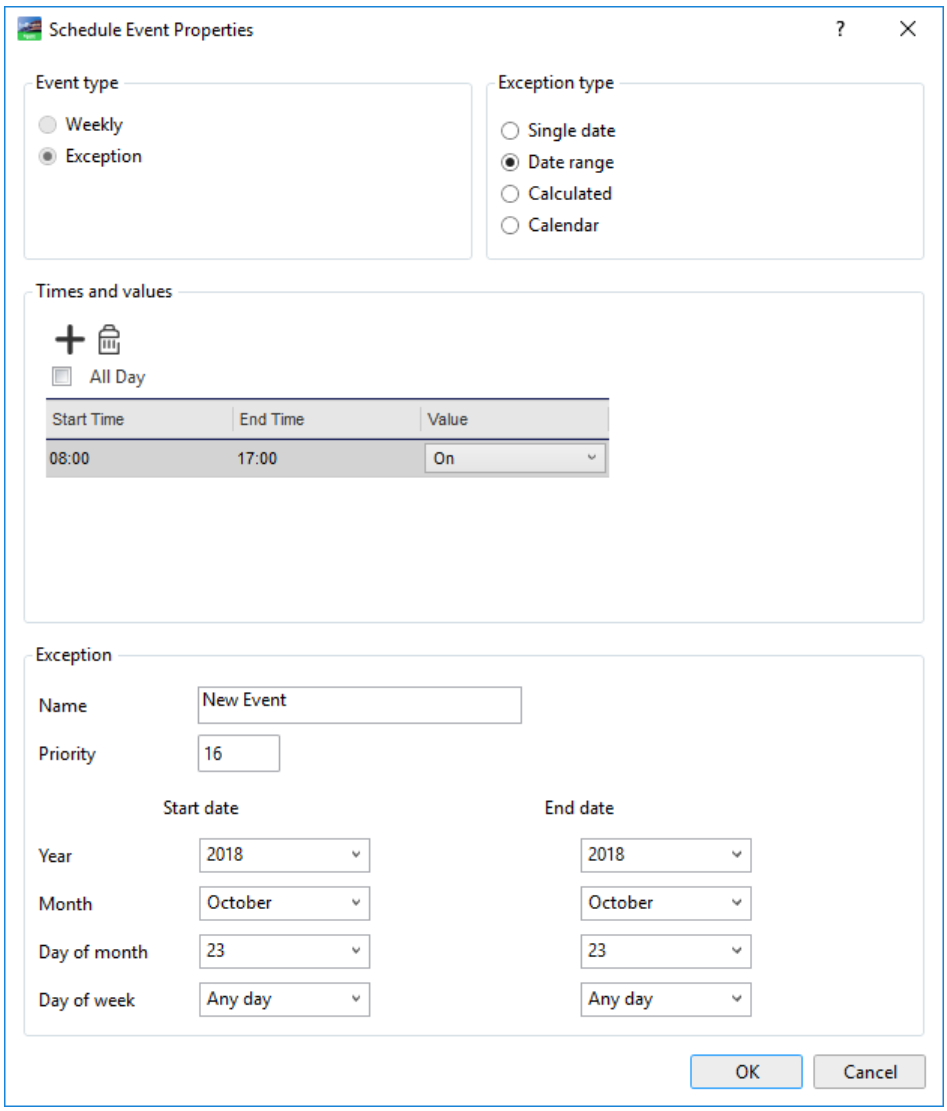


Figure – Schedule Event Properties dialog box - Date range exception view

Table – Schedule Event Properties Dialog Box – Date Range Exception View

Component	Description
Event type	Click **Exception** to display the exception types.
Exception type	Select **Date range** as an exception type to apply to the schedule.
+	Click to add a line to the **Times and values** box.

Continued

Component	Description
	Click to delete an entry from the **Times and values** box.
All Day	Select to create an all day event.
Name	Type a name for the event.
Priority	Select a priority number between 1 (highest priority) and 16 (lowest priority).
Year	Select a year. You can use **Any year** as a valid entry.
Month	Select a month for the exception event or **Odd month**, **Even month**, **Any month**.
Day of month	Select a value for the day of the month. You can use **Any Day**, **Last day**, **Odd days** or **Even days** as valid entries.
Day of week	Select a day of the week. Setting the value to **Any Day** ensures consistency with the rest of the date specification, this is the recommended setting.

21.72 Schedule Event Properties Dialog Box – Calculated Exception View

Use the **Calculated Exception view** in the **Schedule Event Properties** dialog box to schedule recurring exceptions.

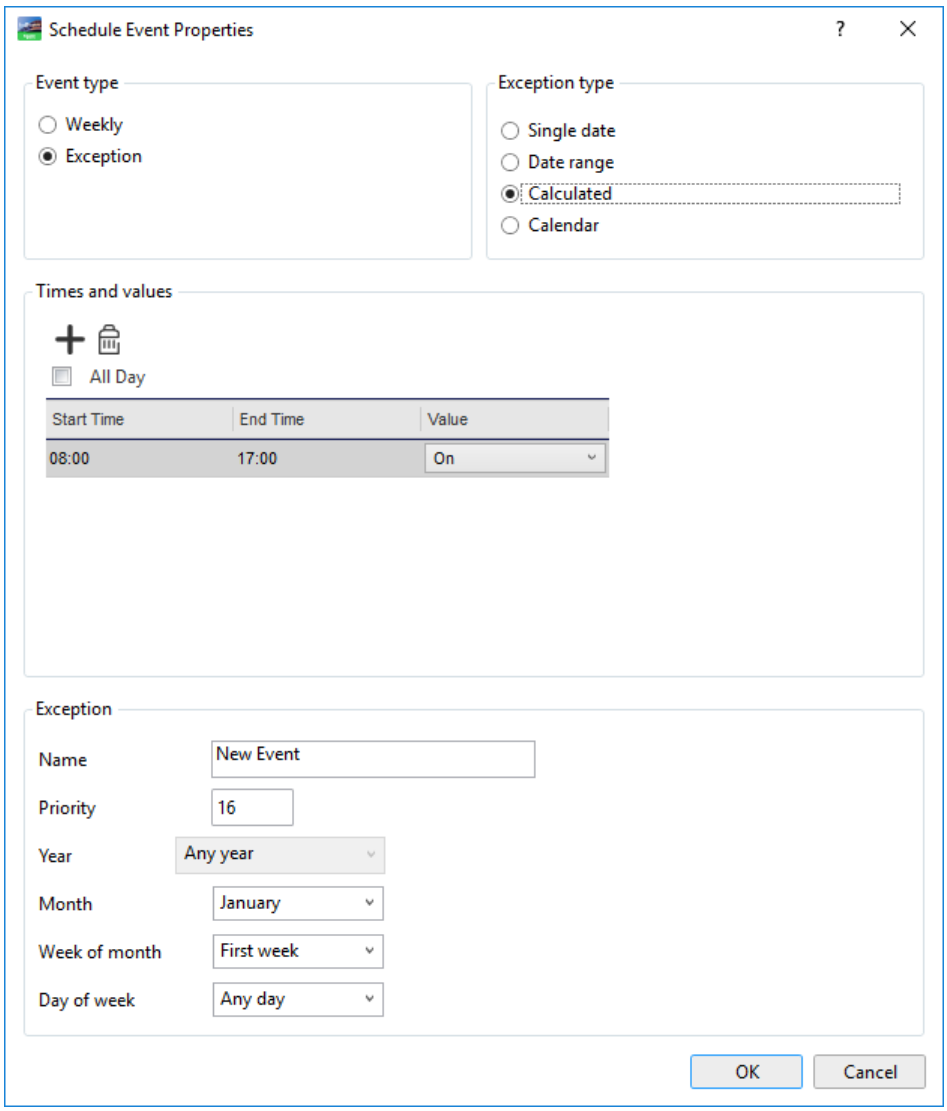


Figure – Schedule Event Properties dialog box - Calculated exception view

Table – Schedule Event Properties Dialog Box – Calculated Exception View

Component	Description
Event type	Click **Exception** to display the exception types.
Exception type	Select **Calculated** for an exception type to apply to the schedule.
+	Click to add a line to the **Times and values** box.

Continued

Component	Description
	Click to delete an entry from the **Times and values** box.
All Day	Select to create an all day event.
Name	Type a name for the event.
Priority	Select a priority number between 1 (highest priority) and 16 (lowest priority).
Year	Displays **Any Year** which is the default for the calculated exception view.
Month	Select a month for the exception event or **Odd month**, **Even month**, **Any month**.
Week of month	Select a week of the month for the exception event or **First week**, **Second week**, **Third week**, **Fourth week**, **Last week**, **Any week**. • **First week** – the first through the seventh day of the month. The second week is then considered day of month eight through fourteen and so on. Since the dates do not necessarily correspond to the first row of the calendar, they may include dates from both the first and second row of the calendar. • **Fifth week** – days 29 through 31 if they exist. It is always less than seven days and is non-existent in February except in a leap year. • **Last week** – the last seven days of the month. It differs from the **Fifth week**.
Week of month	Select a week of the month for the exception event or **First week**, **Second week**, **Third week**, **Fourth week**, **Last week**, **Any week**. • **First week** – the first through the seventh day of the month. Be aware that it does not necessarily correspond to the first row of the calendar since it may include dates from both the first and second row of the calendar. • **Fifth week** – days 29 through 31 if they exist. It is always less than seven days and is non-existent in February except in a leap year. • **Last week** – the last seven days of the month. It differs from the **Fifth week**.
Day of week	Select a day of the week. Setting the value to **Any Day** ensures consistency with the rest of the date specification, this is the recommended setting.

21.73 Schedule Event Properties Dialog Box – Calendar Reference View

Use the **Calendar Reference view** in the **Schedule Event Properties** dialog box to reference a calendar to apply to your schedule.

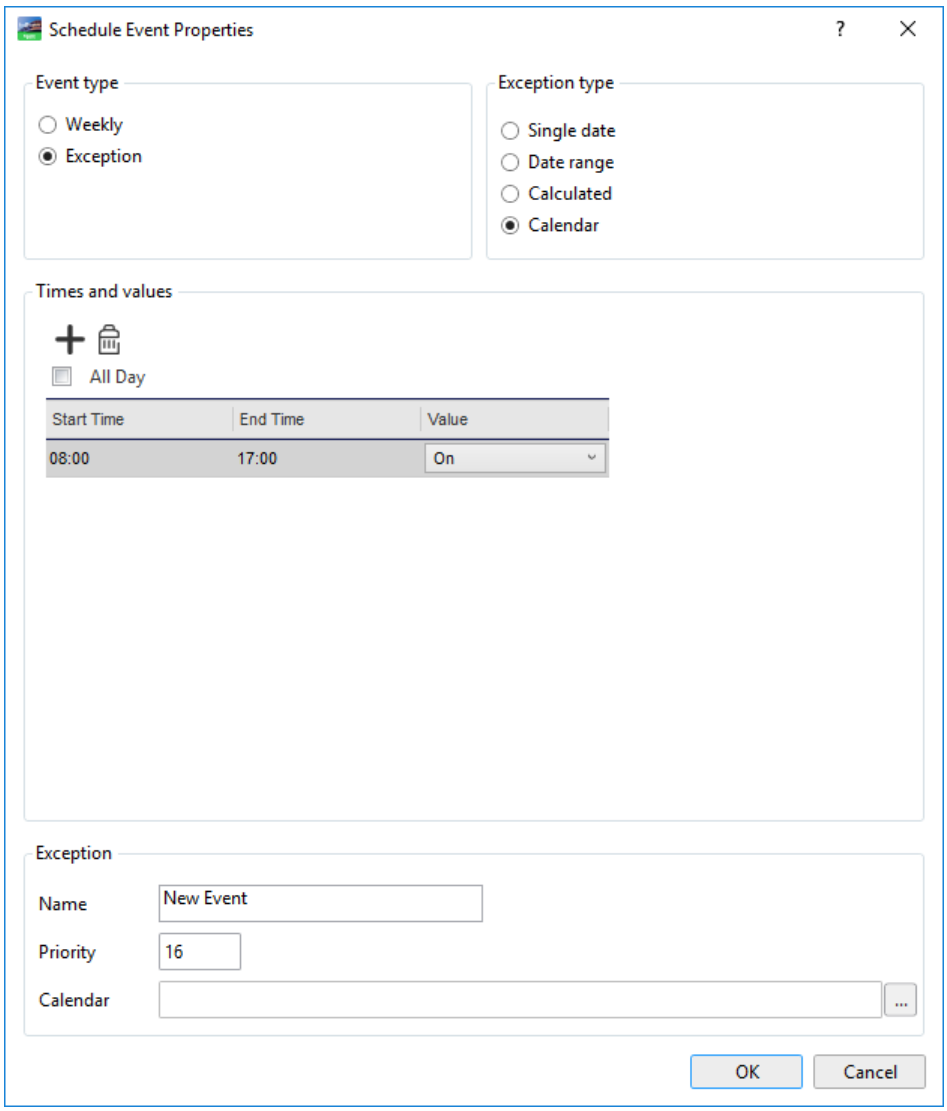


Figure – Schedule Event Properties dialog box - Calendar reference view

Table – Schedule Event Properties Dialog Box – Calendar Reference View

Component	Description
Event type	Click **Exception** to display the exception types.
Exception type	Select **Calendar** to initiate a calendar reference.
+	Click to add a line to the **Times and values** box.

Continued

Component	Description
	Click to delete an entry from the **Times and values** box.
All Day	Select to create an all day event.
Name	Type a name for the event.
Priority	Select a priority number between 1 (highest priority) and 16 (lowest priority).
Calendar	Select a calendar to reference.

21.74 Calendar Editor View

Use the **Calendar Editor** view to manage the calendar events for the calendar.

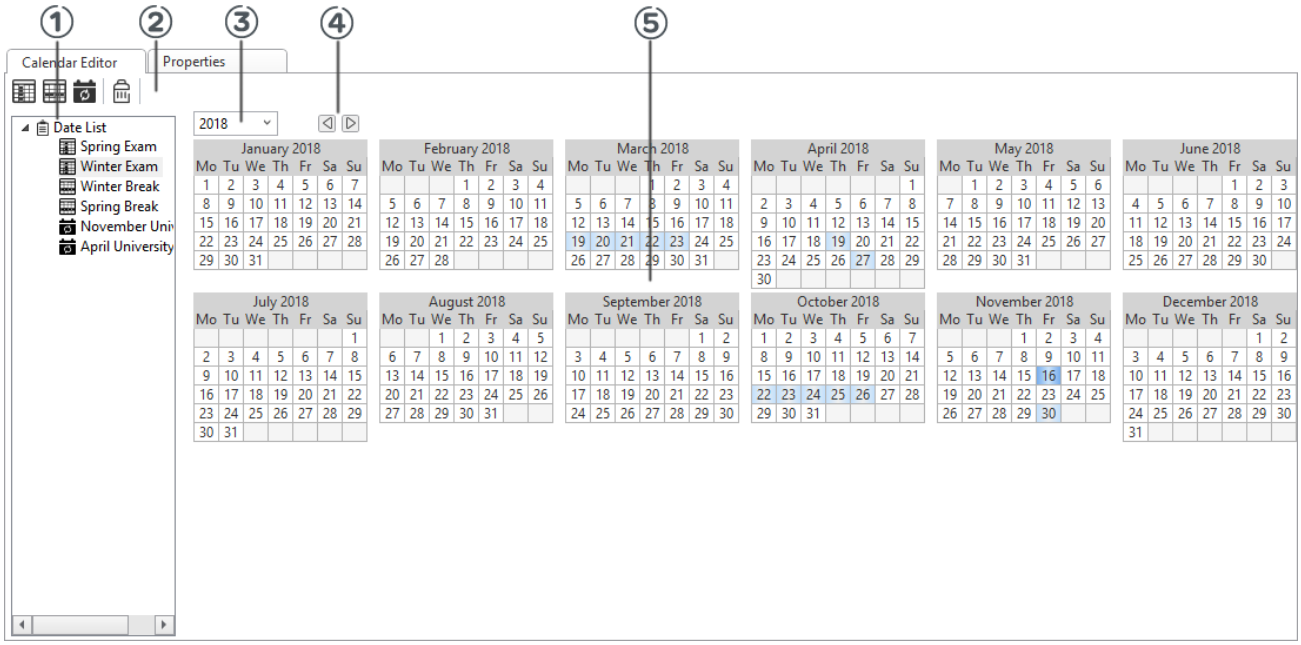


Figure – Calendar Editor view

Table – Calendar Editor View

Number	Description
①	Click to expand the list of calendar events that are included in the calendar. For more information, see section 18.3 “Calendar Events” on page 179.
②	Use the Calendar Editor toolbar to add and delete calendar events. For more information, see section 21.75 “Calendar Editor Toolbar” on page 298.
③	Select the year you want the calendar to display.
④	Click to scroll the calendar one month at the time.
⑤	Displays the calendar for the selected twelve-month period with the dates for the calendar events shown in blue. For more information, see section 18.2 “Calendar Editor Overview” on page 178.

21.75 Calendar Editor Toolbar

Use the **Calendar Editor** toolbar to manage calendars.

Table – Calendar Editor Toolbar

Button	Description
	**Add Date** Click to add an event that occurs on a single day. For more information, see section 21.76 “Edit Calendar Entry Dialog Box – Add Date” on page 299.
	**Add Date Range** Click to add an event that contains a date range. For more information, see section 21.77 “Edit Calendar Entry Dialog Box – Date Range ” on page 300.
	**Add Calculated Date** Click to add an event that recurs on a regular basis. For more information, see section 21.78 “Edit Calendar Entry Dialog Box – Calculated Date ” on page 301.
	**Delete** Click to delete events in the schedule.

21.76 Edit Calendar Entry Dialog Box – Add Date

Use the **Edit Calendar Entry** dialog box to configure a calendar entry for a single date exception event.

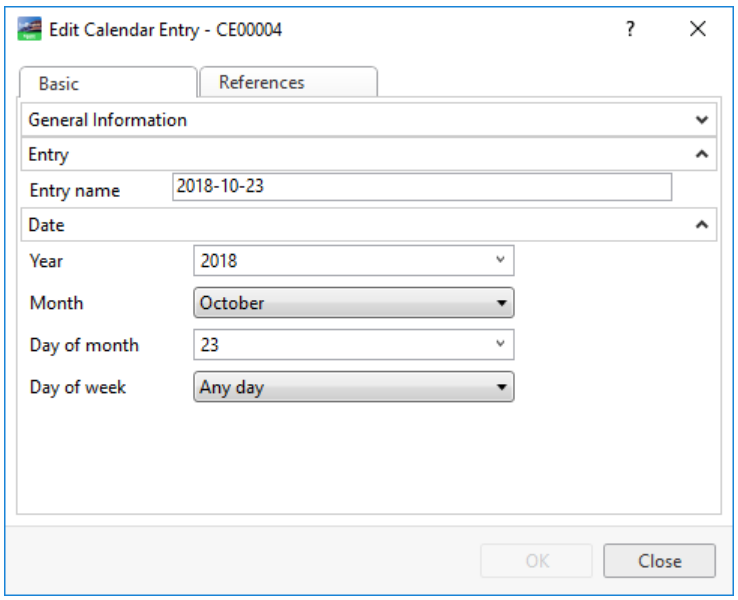


Figure – Edit Calendar Entry dialog box - add date

Table – Edit Calendar Entry Dialog Box – Add Date

Component	Description
Entry name	Type an entry name for the calendar entry.
Year	Select a **Year** for the date calendar entry. You can also use **Any Year** as a valid entry.
Month	Select a month for the exception event or **Odd month**, **Even month**, **Any month**.
Day of month	Select a value for the day of the month. You can use **Any Day**, **Last day**, **Odd days** or **Even days** as valid entries.
Day of week	Select a day of the week. Setting the value to **Any Day** ensures consistency with the rest of the date specification, this is the recommended setting.

21.77 Edit Calendar Entry Dialog Box – Date Range

Use the **Edit Calendar Entry** dialog box to configure a date range calendar entry for an exception event.

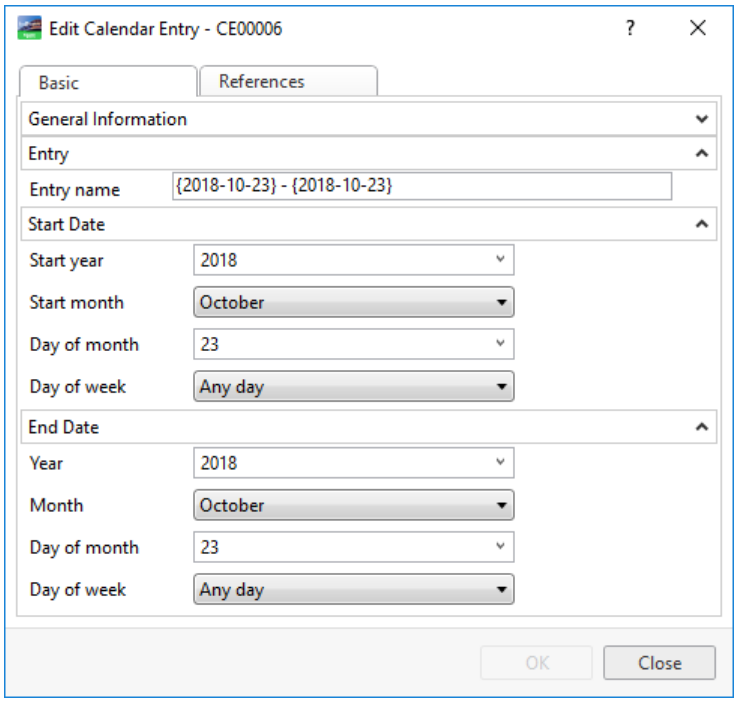


Figure – Edit Calendar Entry dialog box - date range

Table – Edit Calendar Entry Dialog Box – Date Range

Component	Description
Entry name	Type an entry name for the calendar entry.
Start year	Select a year. You can use **Any year** as a valid entry.
Start month	Select a month for the exception event or **Odd month**, **Even month**, **Any month**.
Day of month	Select a value for the day of the month. You can use **Any Day**, **Last day**, **Odd days** or **Even days** as valid entries.
Day of week	Select a day of the week. Setting the value to **Any Day** ensures consistency with the rest of the date specification, this is the recommended setting.
Year	Select a year. You can use **Any year** as a valid entry.
Month	Select a month for the exception event or **Odd month**, **Even month**, **Any month**.

21.78 Edit Calendar Entry Dialog Box – Calculated Date

Use the **Edit Calendar Entry** dialog box to create a calendar entry for a recurring exception event.

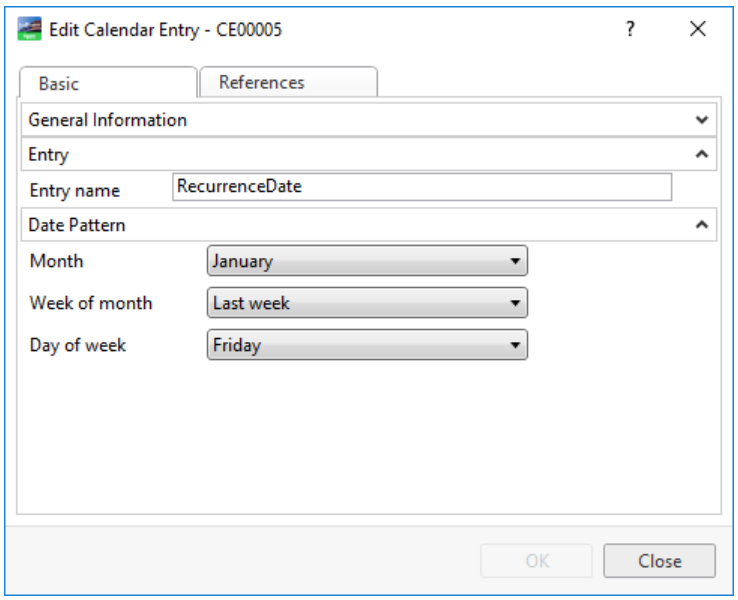


Figure – Edit Calendar Entry dialog box - calculated date

Table – Edit Calendar Entry Dialog Box – Calculated Date

Component	Description
Entry name	Type an entry name for the calendar entry.
Month	Select a month for the exception event or **Odd month**, **Even month**, **Any month**.
Week of month	Select a week of the month for the exception event or **First week**, **Second week**, **Third week**, **Fourth week**, **Last week**, **Any week**. • **First week** – the first through the seventh day of the month. Be aware that it does not necessarily correspond to the first row of the calendar since it may include dates from both the first and second row of the calendar. • **Fifth week** – days 29 through 31 if they exist. It is always less than seven days and is non-existent in February except in a leap year. • **Last week** – the last seven days of the month. It differs from the **Fifth week**.
Day of week	Select a day of the week. Setting the value to **Any Day** ensures consistency with the rest of the date specification, this is the recommended setting.

21.79 Graphics Toolbar

Use the **Graphics** toolbar to navigate, zoom, and print a graphic.

Table – Graphics Toolbar

Button	Description
	**Reset Zoom** Click to restore the graphic to its original size.
	**Navigate** Click to activate the pointer in the graphic. Use the pointer to change values, change the status of a digital value, or open links and attachments.
	**Scroll** Click to move the graphic vertically or horizontally.
	**Zoom In** Click to increase the scale of the graphic.
	**Zoom Out** Click to decrease the scale of the graphic.
	**Print** Click to print a graphic.
	**Print Setup** Click to open the **Print setup** dialog box.
	**Print Preview** Click to preview a printout of a graphic.

21.80 Commit Page

The **Commit Page** displays the progress indication.

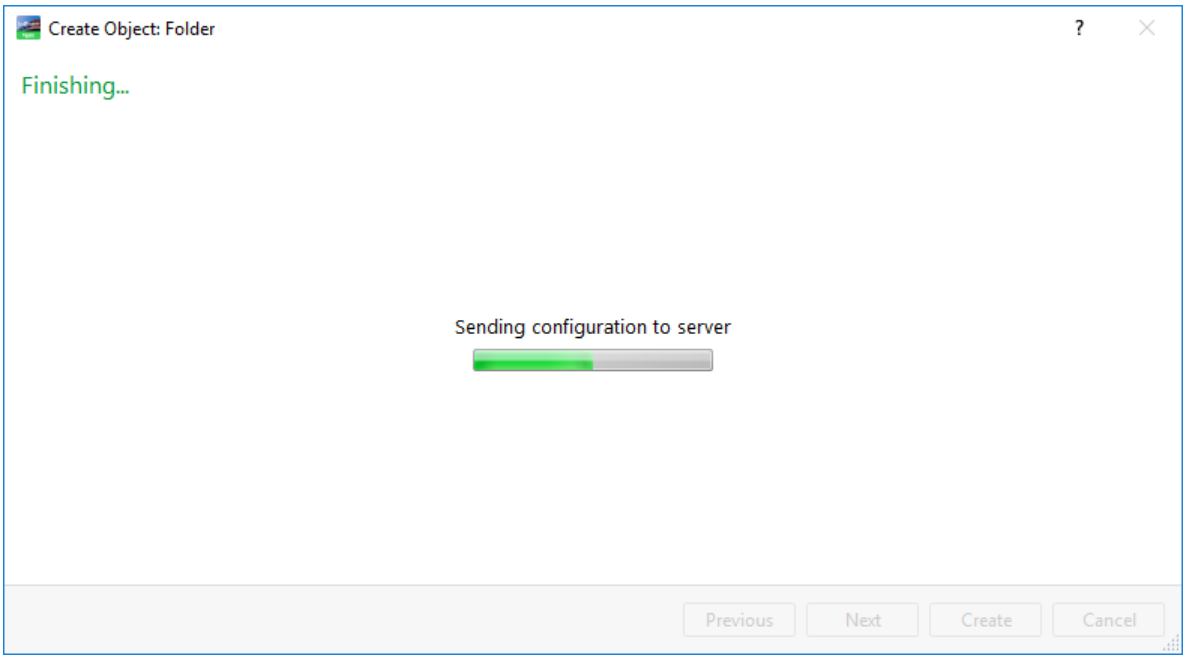


Figure – Commit page

Table – Commit Page

Component	Description
[**Progress bar**]	Displays the progress indication.

21.81 Building Operation WorkStation Error

Use the **Building Operation WorkStation Error** dialog box to send a file with information about the cause of the crash to Schneider Electric.

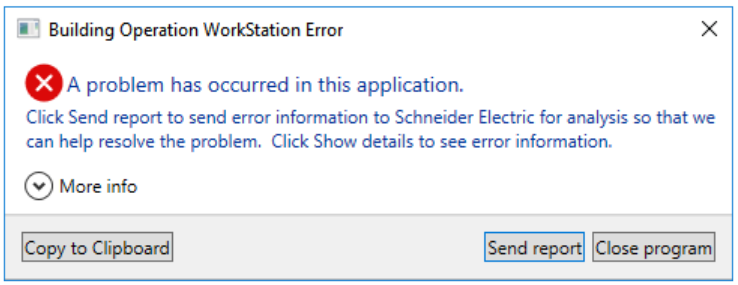


Figure – Building Operation WorkStation Error

Table – Building Operation WorkStation Error

Component	Description
More info	Click to get more information on the cause of the crash.
Copy to Clipboard	Click to copy information about the cause of the crash to the Windows clipboard.
Send report	Click to send the crash report to Schneider Electric.
Close program	Click to close the program without sending any crash report.
Continue	Click to resume the program. This option is only available when the program is able to resume after a crash, which is not typically the case.

Schneider Electric
www.se.com/buildings

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