

SIEMENS

SIMATIC HMI

WinCC V7.5 SP2 WinCC/Calendar Options

System Manual

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Printout of the Online Help

Legal information

Warning notice system

This manual contains notices you have to observe in order to ensure your personal safety, as well as to prevent damage to property. The notices referring to your personal safety are highlighted in the manual by a safety alert symbol, notices referring only to property damage have no safety alert symbol. These notices shown below are graded according to the degree of danger.

 DANGER
indicates that death or severe personal injury will result if proper precautions are not taken.

 WARNING
indicates that death or severe personal injury may result if proper precautions are not taken.

 CAUTION
indicates that minor personal injury can result if proper precautions are not taken.

NOTICE
indicates that property damage can result if proper precautions are not taken.

If more than one degree of danger is present, the warning notice representing the highest degree of danger will be used. A notice warning of injury to persons with a safety alert symbol may also include a warning relating to property damage.

Qualified Personnel

The product/system described in this documentation may be operated only by **personnel qualified** for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified personnel are those who, based on their training and experience, are capable of identifying risks and avoiding potential hazards when working with these products/systems.

Proper use of Siemens products

Note the following:

 WARNING
Siemens products may only be used for the applications described in the catalog and in the relevant technical documentation. If products and components from other manufacturers are used, these must be recommended or approved by Siemens. Proper transport, storage, installation, assembly, commissioning, operation and maintenance are required to ensure that the products operate safely and without any problems. The permissible ambient conditions must be complied with. The information in the relevant documentation must be observed.

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We have reviewed the contents of this publication to ensure consistency with the hardware and software described. Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions.

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Calendar Options overview

Contents

The Calendar Options Information System provides important information concerning the "WinCC/Calendar Scheduler" and "WinCC/Event Notifier" options.

These WinCC Calendar Options share components. The entry "Calendar Options" appears in the WinCC Explorer after the installation of one or both options. The functionality available depends on the installed option.

In some chapters, alternate terminology may be used to represent names where functionality is the same in the options.

Terminology	Calendar Scheduler	Event Notifier
schedule	action schedule	notification schedule
resource	action, calendar	notification, contact, contact group, calendar

WinCC/Calendar Options Installation Notes

This chapter describes the installation of server and client components for the Calendar Scheduler and Event Notifier options. The software for both options is included on the same CD. A special license is required for each option.

WinCC/Calendar Options Release Notes

This chapter provides important and up-to-date information about the Calendar Scheduler and Event Notifier options.

WinCC/Calendar Options Getting Started

This chapter provides a quick introduction to the Calendar Scheduler and Event Notifier options. It does not contain a comprehensive list of all functions, but includes information for you to create a schedule and see the results.

WinCC/Calendar Scheduler Documentation

This chapter provides comprehensive information about all functions in the Calendar Scheduler option.

WinCC/Event Notifier Documentation

This chapter provides comprehensive information about all functions in the Event Notifier option.

WinCC/Calendar Options Installation Notes

2.1 Installing server and client

Introduction

The WinCC/Calendar Options include the WinCC/Calendar Scheduler and the WinCC/Event Notifier. A WinCC Calendar Option consists of server and client components that can be installed together on the same computer. These components can be installed across multiple computers in the WinCC Client/Server, redundant, and WebNavigator system configurations.

Only the functionality for the installed Calendar Option is available. When both options are installed, the functionality of both options is available.

Requirements

The following components are required on any system where a Calendar Option is installed, including WebNavigator clients:

License key for one or both Calendar Options:

- WinCC/Calendar Scheduler Server and Client
- WinCC/Event Notifier Server and Client

Note

Hardware and software requirements

.NET Framework 4.0 must be installed in the WebNavigator client machine.

For other hardware and software prerequisites to install Calendar Options V7.5 SP2, refer WinCC Information System > Installation Notes > WinCC installation requirements.

All WinCC advanced options follow the same requirements as WinCC.

Licensing

Each computer where you want to install the server component of a Calendar Option must have a license for the WinCC Calendar Option. No license is required for the computer where the clients of the Calendar Option will run. Information about licensing is in the WinCC Information System under "Installation Notes" and "Licensing".

2.1 Installing server and client

Installing Calendar Option

Installing server and client

You can install the server and client components of a Calendar Option on a system where the WinCC Server software is installed. Detailed information about WinCC installation is in the WinCC documentation.

Installing client only

You can install the client component of a Calendar Option on a system where the WinCC Client software is installed.

Installing on WebNavigator client

You can install the Calendar Options WebPlugin component on a system where the WinCC WebNavigator Client software is installed. Detailed information about WebNavigator installation is in the WinCC\WebNavigator documentation.

Installation of server/client

1. Insert the Calendar Options DVD into the DVD drive.
The DVD starts automatically if Autorun is enabled in the operating system. If the Autorun function is disabled, start the Setup.exe program on the DVD.
2. Choose the setup language for the installation and click "Next".
3. Follow the on-screen instructions.
When prompted, read and accept the license agreements.
4. Select the following calendar options: "Event Notifier" and/ or "Calendar Scheduler"

Note

When a server component is selected, the appropriate client component will also be installed at the same time.

5. Click "Next" and start the installation.
You can track the status of the installation in the displayed dialog.
6. At the end of the installation, restart the computer.
The editor for the options is installed and added under "Calendar Options" in the navigation window of the WinCC Explorer.

Note

Cascaded server configuration

The cascaded server configuration is not supported.

Installation on WebNavigator client

1. On the client machine, enter the address of the WebNavigator server in the Internet Explorer, for example: `http://server_name`.
2. If the WebNavigator Client software is not installed, a message will be displayed for you to confirm installation of the software.
3. When the "Download/Install - WebNavigator Custom Plugins" screen displays, click the arrow for the "WinCC Calendar Options WebPlugin". Follow the on-screen instructions.

Installation: Calendar Option in demo mode

The typical setup installs both Calendar Options. If only one Calendar Option is licensed, the Calendar Option with the missing license will run in demo mode.

If you do not wish to install both options, select "Custom" on the "Setup Type" screen and choose the desired option.

See also

<http://support.automation.siemens.com/WW/view/en/73443294> (<http://support.automation.siemens.com/WW/view/en/73443294>)

2.2 Importing packages

Introduction

A client requires the packages from the servers whose data it wants to use. Detailed information about importing a package is in the WinCC documentation.

Requirements

- For a client only installation, you must import the server package into the project to ensure a proper connection.
- Server packages must be imported in the following cases:

Standard clients	For a Calendar Control to access the Calendar Option servers, a server package must be imported into the client for each server where a calendar is to be accessed.
WebNavigator clients	For a Calendar Control, running in a WebNavigator client to access the Calendar Option servers, a server package must be imported into the WebNavigator server for each server where a calendar is to be accessed. If the WebNavigator server runs a Calendar Option server, the WebNavigator server must have a package created for itself.

2.3 Uninstalling Calendar Options

Introduction

You can uninstall the server and the client of WinCC Calendar Options.

Procedure

1. Open the Windows "Control Panel" and double-click the "Add or Remove Programs" symbol.
2. Click the "Change or Remove Programs" icon.
3. Select the Calendar Options server or client and then click "Remove".
4. Click "Next" and follow the on-screen instructions.
The Calendar Options server or client is removed from your system.

WinCC/Calendar Options Release Notes

3.1 Release notes

Contents

These release notes contain important instructions.

The statements in these release notes are more important than the instructions in the manuals and online help.

Please read these release notes carefully as they contain useful information.

3.2 Notes on Calendar Options

Migrating single-user projects created before V7.2

After migrating a single-user project, you need to run the CalendarDCF program to automatically add the Calendar Options entries to the DCF file for each project.

1. Run the CalendarDCF program from the following path:
"Program Files (x86)\Siemens\WinCC\Options\Calendar Options\bin\CalendarDCF.exe"
2. Browse for the DCF file (ProjectName.dcf) in the project directory. Click "Add" to insert the appropriate Calendar Options entries.

Migrating projects

The Calendar Options system supports implicit migration of the calendar options project. Only user need to reboot the machine after the installation of the latest version. The calendar options will automatically migrate all the projects present in the machine.

Configuration of E-Mails

The testability of e-mails is improved.

The encryption via TLS is possible and is automatically used on Port 587.

TLS was renamed to SSL and is required only for SSL.

Yahoo email account is supported through SSL authentication.

Delta-upload

It is possible to delta-upload an Operator Station (OS), but changes made for Calendar Options at the Engineering Station (ES) are not transferred to the OS.

Multiuser engineering

Multiuser engineering is not supported.

Installation of .NET Framework 4.0

Installation of the .NET Framework 4.0 in the WebNavigator client machine is required to display the Calendar Options Control.

3.3 Performance Restrictions

Restrictions due to performance and capacity limits

This section contains information on the tested performance and capacity limits of Calendar Options V7.5 SP2.

Based on the information in this section, determine whether the allocation you have planned is within the expected performance and capacity limits.

Configuration/ supported limits

Supported limits define the tested value for a specific parameter. The standard values for these parameters were established in tests and represent the known limitations of the product.

Exceeding the supported limits can lead to unexpected results, significant performance losses, and other negative consequences.

The following sample configuration is intended to provide you with a guide to the dimensions within which the functionality of Calendar Options is guaranteed.

Sample configuration:

- WinCC server with WebNavigator server and multi-user project
- Number of Text Library entries: 12 000
- Number of activation and notification schedules, as well as actions and notifications:
 - Actions and notifications: 200
 - Schedules: 200

Result

Picture opening times with the CalendarControl

Server	10 seconds
Client	10 seconds
Web	10 seconds

Loading time of the CalendarControl

Server	10 seconds
Client	10 seconds

3.4 Service and Support

3.4.1 Warnings

Safety notes

Warning notice system

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indicates that minor personal injury can result if proper precautions are not taken.

NOTICE

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Note

is an important information about the product, the way to handle the product or the respective part of the documentation and we wish to especially bring this to your notice.

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Proper use

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Security information

Siemens provides products and solutions with industrial security functions that support the secure operation of plants, systems, machines and networks.

In order to protect plants, systems, machines and networks against cyber threats, it is necessary to implement – and continuously maintain – a holistic, state-of-the-art industrial security concept. Siemens’ products and solutions constitute one element of such a concept.

Customers are responsible for preventing unauthorized access to their plants, systems, machines and networks. Such systems, machines and components should only be connected to an enterprise network or the internet if and to the extent such a connection is necessary and only when appropriate security measures (e.g. firewalls and/or network segmentation) are in place.

For additional information on industrial security measures that may be implemented, please visit

<http://www.siemens.com/industrialsecurity>

Siemens’ products and solutions undergo continuous development to make them more secure. Siemens strongly recommends that product updates are applied as soon as they are available and that the latest product versions are used. Use of product versions that are no longer supported, and failure to apply the latest updates may increase customer’s exposure to cyber threats.

To stay informed about product updates, subscribe to the Siemens Industrial Security RSS Feed under

<http://www.siemens.com/industrialsecurity>

Disclaimer of Liability

We have reviewed the contents of this publication to ensure consistency with the hardware and software described.

Since variance cannot be precluded entirely, we cannot guarantee full consistency. However, the information in this publication is reviewed regularly and any necessary corrections are included in subsequent editions. Suggestions for improvement are welcomed.

The statements in the online documentation are more binding than the statements in the manuals and PDF files.

Please follow the Release Notes and Installation Notes. The information in these Release Notes and Installation Notes has priority over that in the manuals and online help with regard to legal validity.

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SIMATIC Human Machine Interfaces

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3.4.2 GDPR - General Data Protection Regulations

Siemens takes data privacy principles, such as the privacy by design and default principle, into account when developing its products and services.

For this product SIMATIC WinCC V7.5 incl. Options this means the following:

Personal data processed by the Application

This product collects and processes the following personal data:

- User name, i. e. Login, which may directly contain or establish a reference to the family name and/or first name
- Timestamps: date / time of login, logoff and access
In the WinCC Option for Process Control application "Split Screen Manager", the login timestamp and user name are saved without encryption with the picture management data. In the WinCC/WebNavigator diagnostic page, logged in users and timestamps are saved without encryption.
- Location data (time zone)
- Computer name
- IP addresses
- MAC addresses
- E-mail addresses (WinCC Options)
- In case of using UMC, additional personal data can be added in the tool, e. g. telephone numbers or addresses.
This data is not needed for the product functionality and should not be stored on the same medium.

If the user links the above mentioned data with other data, e. g. shift plans, or stores personal data on the same medium, e. g. hard disk, and thus establishes a personal reference, the user must ensure compliance with data protection regulations.

Purposes

The above data is required for the following purposes:

- Access protection and security measures (e. g. Login, IP address)
- Process synchronization and integrity (e. g. time zone information, IP addresses)
- Archiving system for traceability and verification of processes (e. g. access timestamps)
- Message system for traceability and availability (e. g. e-mail notification)

The storage of data is appropriate and limited to what is necessary, as it is essential to identify the authorized operators and process events.

Data configuration

The customer may configure the data collected via the product as follows:

- Display data in process pictures
- Data output in form of reports, e. g. for printing or display as electronic file
- Data collection and evaluation in form of graphics, e. g. for KPI analysis

Deletion policy

The product does not provide an automatic deletion of the above data.

If necessary, these can be deleted manually if desired. To do this, please refer to the product documentation or contact customer support.

Securing of data

The above data will not be stored anonymously or pseudonymized, because the purpose of access and event identification cannot be achieved otherwise.

The above data is secured by adequate technical measures, such as:

- Encryption of log data
- Storing the process data in access-protected SQL databases
The user must ensure the access protection as part of their process configuration.

3.4.3 Customer Support

Customer Support and Technical Support

You can reach the SIMATIC hotlines at the times specified in the following table. The SIMATIC hotline employees speak German and English. The Authorization hotline offers French, Italian or Spanish customer support in addition to German and English.

Technical support

Nuremberg	(GMT +1:00)
Service Hours	Monday - Friday, 8:00 to 17:00 (CET/CEST)
Phone	+49 (0)911 895 7222
Fax	+49 (0)911 895 7223
E-mail	http://www.siemens.com/automation/support-request (http://www.siemens.com/automation/support-request) (http://www.siemens.com/automation/support-request)

An overview of the Technical Support is available at the following URL:

- <http://support.automation.siemens.com/WW/view/en/16605032> (<http://support.automation.siemens.com/WW/view/en/16605032>)

Automation Value Card (AVC)

The Automation Value Card (AVC) provides extended Technical Support and is available 24 hours every day of the week. Information on the AVC can be found at the following URL:

- <http://support.automation.siemens.com/WW/view/en/21981898> (<http://support.automation.siemens.com/WW/view/en/21981898>)

SIMATIC Customer Online Support

Service and Support

An overview of the support offering for our products is available at the following URL:

- <http://www.siemens.com/automation/service&support> (<http://www.siemens.com/automation/service&support>)

In Product Support, for example, you will find downloads of firmware updates, service packs and useful utilities.

Online Help is available so that you can successfully use the Support offering. Open the Online Help by selecting the corresponding button on the Internet site or at the following URL:

- http://support.automation.siemens.com/WW/support/html_00/help/Online_Hilfe.htm (http://support.automation.siemens.com/WW/support/html_76/help/Online_Hilfe.htm)

WinCC FAQs

WinCC Online Support with information on FAQs (Frequently Asked Questions) may also be found at the following URL:

- <http://support.automation.siemens.com/WW/view/de/10805548/133000> (<http://support.automation.siemens.com/WW/view/en/10805583/133000>)

Technical Forum

The Technical Forum supports exchange with other SIMATIC users. It is available at the following URL:

- <http://www.siemens.com/automation/csi/forum> (http://www.siemens.de/automation/csi_en/forum)

Technical documentation for SIMATIC products

You can find a guide to the technical documentation provided for individual SIMATIC products and systems at the following URL:

- <http://www.siemens.com/simatic-tech-doku-portal> (<http://www.siemens.com/simatic-tech-doku-portal>)

Contact person database

To contact your local agent, search our contact database at the following URL:

- <http://www.automation.siemens.com/partner/index.asp> (<http://www.automation.siemens.com/partner/index.asp?lang=en>)

Product Information

SIMATIC WinCC

Go to the following URL for additional information about WinCC products:

- <http://www.siemens.com/wincc> (<http://www.siemens.com/wincc>)

SIMATIC Products

Go to the following URL for additional information about SIMATIC products:

- <http://www.siemens.com/simatic> (<http://www.siemens.com/simatic>)

See also

Internet: Support Request (<http://www.siemens.com/automation/support-request>)

Internet: Technical support (<http://support.automation.siemens.com/WW/view/en/16605032>)

Internet: Automation Validation Card (AVC) (<http://support.automation.siemens.com/WW/view/en/21981898>)

Internet: Service and Support (<http://www.siemens.com/automation/service&support>)

Internet: WinCC FAQs (<http://support.automation.siemens.com/WW/view/en/10805583/133000>)

Internet: Support Technical Forum (http://www.siemens.de/automation/csi_en/forum)

Internet: Support Online Help (http://support.automation.siemens.com/WW/support/html_76/help/Online_Hilfe.htm)

Internet: Technical documentation for SIMATIC products (<http://www.siemens.com/simatic-tech-doku-portal>)

Internet: Contact person database (<http://www.automation.siemens.com/partner/index.asp?lang=en>)

Internet: Information about WinCC (<http://www.siemens.com/wincc>)

Internet: SIMATIC Products (<http://www.siemens.com/simatic>)

<http://www.siemens.com/automation/support-request> (<http://www.siemens.com/automation/support-request>)

3.4.4 Support Request

Dear customer

In order to provide you with fast and effective support, please complete the "Support Request" form online on the Internet. Describe the problem in as much detail as possible. We would appreciate if you would provide us with all project data, so that we can reproduce the error situation or shorten the turn-around time.

Before filling out the support request, check whether your configured quantity structure is within the range of tested quantity structures (see topic "Performance Data").

Support Request form

The Support Request form is available at the following URL:

- <http://www.siemens.com/automation/support-request> (<http://www.siemens.com/automation/support-request>)

When filling out the report, you will be guided through several steps, which will ask about all required information.

A detailed description of the Support Request can be found at the following URL:

- <http://support.automation.siemens.com/WW/view/en/16605654> (<http://support.automation.siemens.com/WW/view/en/16605654>)

Procedure

1. Open the "Support Request" form using the link on the Internet. Step 1 "Select product" is displayed:
2. Enter the project name in the "Product/Order number" box. Upper/lower case is not relevant. Search for parts of the product name or enter the full product name in the correct order. You can e. g. search for the following terms:
 - "WinCC Runtime"
 - "WinCC DataMonitor"
 - "WinCC webnavigator"
 - "Connectivity"The found products are offered in the "Product selection" field.
3. Select the desired product and click on "Next" to switch to step 2 "Select use case".
4. Select a use case or describe your specific use case in the "Other application case" field.
5. Press "Next" to switch to step 3 "Our solutions".
Suggested solutions and FAQs for the selected key words are listed.
Once you have found a suggested solution for your problem, you can close the form in the browser.
If you did not find any applicable suggested solutions, press "Next" to switch to step 4 "Describe problem".
6. Describe your problem as exactly as possible in the "Details" field.
Pay particular attention to the following questions and comments. Please also check the WinCC installation and configuration with regard to the following references.
If you have any idea what has caused the error, please let us know. No detail should be omitted, even if you consider it unimportant.
 - Was the configuration data created with older WinCC versions?
 - How can the error be reproduced?
 - Are other programs running simultaneously with WinCC?
 - Have you deactivated the screen saver, virus checker and power management function?
 - Search the computer for log files (WinCC\Diagnose*.log, drwatson.log, drwtsn32.log). The log files are needed for error analysis. Thus, be sure to send the log files as well.
7. Use the "Search" button to upload your affected project and the log files (e. g. as a Zip file) to the Support Request.
Press "Next" to switch to step 5 "Provide contact information".
8. Enter your contact information.
Read the privacy notice and choose whether your personal data should be permanently saved.
Press "Next" to switch to step 6 "Summary & Send".
9. Press the "Print" button if you would like to print the support request.
You close the support request by clicking the "Send" button.
Your data will be transmitted to Customer Support and processed there.

Thank you for your cooperation. We hope that we can be of assistance in solving your problems.

Your WinCC Team

See also

Internet: Error report (<http://www.siemens.com/automation/support-request>)

Internet: Overview of Support Request (<http://support.automation.siemens.com/WW/view/en/16605654>)

3.4 Service and Support

WinCC/Calendar Options Getting Started

4.1 Introduction

Welcome to the WinCC/Calendar Options Getting Started document. WinCC/Calendar Options includes Calendar Scheduler and Event Notifier.

The Calendar Scheduler manages time-based activities for controlling automated processes that WinCC supervises. You can configure action schedules to change the value of WinCC tags in order to drive real world Inputs/Outputs (I/O) and turn the equipment on/off.

The Event Notifier manages time-based scheduling of personnel to receive notifications from automated processes that WinCC supervises. The Event Notifier notifies about an alarm condition to the scheduled person based on time of the day and day of the week.

This Getting Started document provides a quick introduction to Calendar Options. It does not contain a comprehensive list of all possible functions, but includes information to create a schedule and see the results.

4.2 Prerequisites

Configuration

The Example described in this document uses the configuration where the server and client components are installed on the same computer.

It is assumed that the user is aware of working with WinCC.

Note

Detailed installation information is available in WinCC documentation and WinCC/Calendar Options documentation.

Requirements

- A computer with WinCC V7.5 SP2 installed.
- Calendar Options is installed successfully.

4.3 Starting the Calendar Options Editor

- License key for one or both the Calendar Options:
 - Calendar Scheduler - Server and Client
 - Event Notifier - Server and Client

The options can run in demo mode without licensing. Information about licensing and demo mode is available in the WinCC Information System under "Installation Notes > Licensing".

- WinCC project with configured tags, scripts, and alarms.
This document references the WinCC demo project named "DemoProjectV7.5 SP2". You may download this project from the following URL:
 - Internet: WinCC demo projects (<https://support.industry.siemens.com/cs/products?search=demo&ntp=ExampleOfUse&o=DefaultRankingDesc&pnid=14867&lc=en-WW>)

Alternatively, you may use your own project that has configured tags, scripts, and alarms.

4.3 Starting the Calendar Options Editor

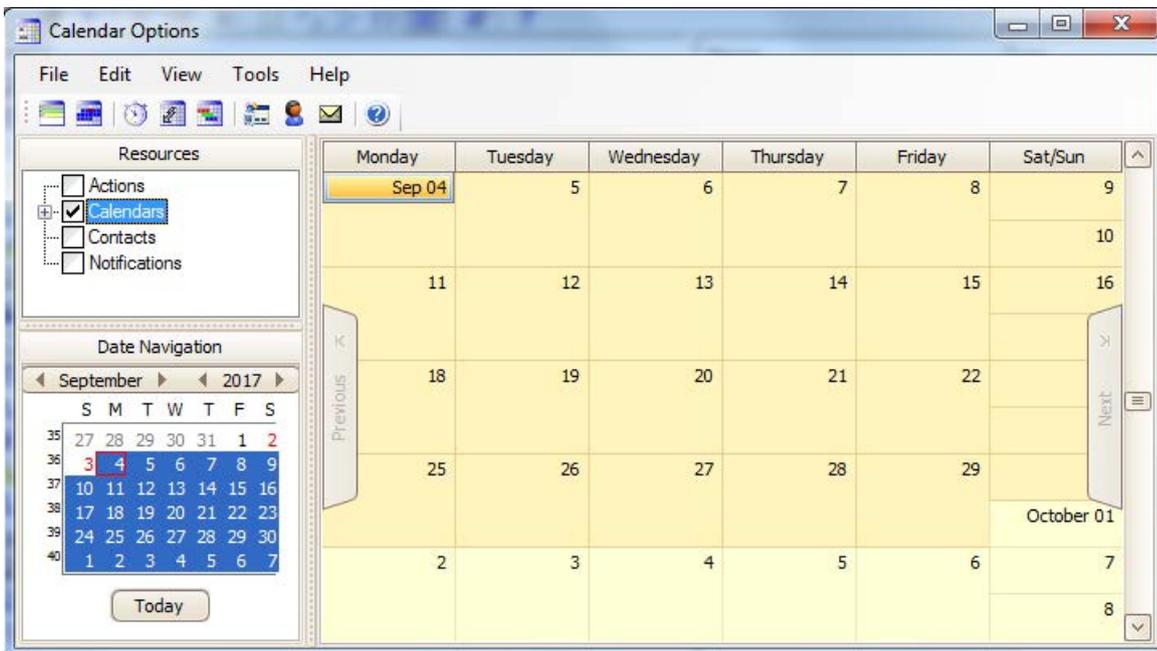
Introduction

The Calendar Options Editor can be started only for the project currently open in WinCC Explorer. The Calendar Options Editor contains elements of the Calendar Scheduler and Event Notifier, if both the options are installed. If only one option is installed, the editor provides elements of the installed option.

Procedure

1. Open "DemoProjectV7.5 SP2" in WinCC Explorer.
For more information, see the WinCC Information System under "Working with Projects".
2. In the navigation window, right-click "Calendar Options" and choose one of the installed options:
 - "Open Calendar Scheduler"
 - "Open Event Notifier"

The Calendar Options Editor window opens and the "Default" calendar is displayed.



4.4 Scheduling an action

4.4.1 Overview

This chapter provides instructions to create an action schedule and see the results.

In this demonstration, WinCC, Calendar Scheduler Server, and Calendar Scheduler Client are all installed on the same computer.

Detailed information is available in the WinCC documentation and in the WinCC/Calendar Scheduler documentation.

This chapter provides instructions to:

- Create an action that sets a tag value.
- Create an action schedule to execute the action at the specified time.

- Insert the Calendar Control into a picture to display the schedule.
- View the action schedule in Runtime.

4.4.2 Creating an action

Introduction

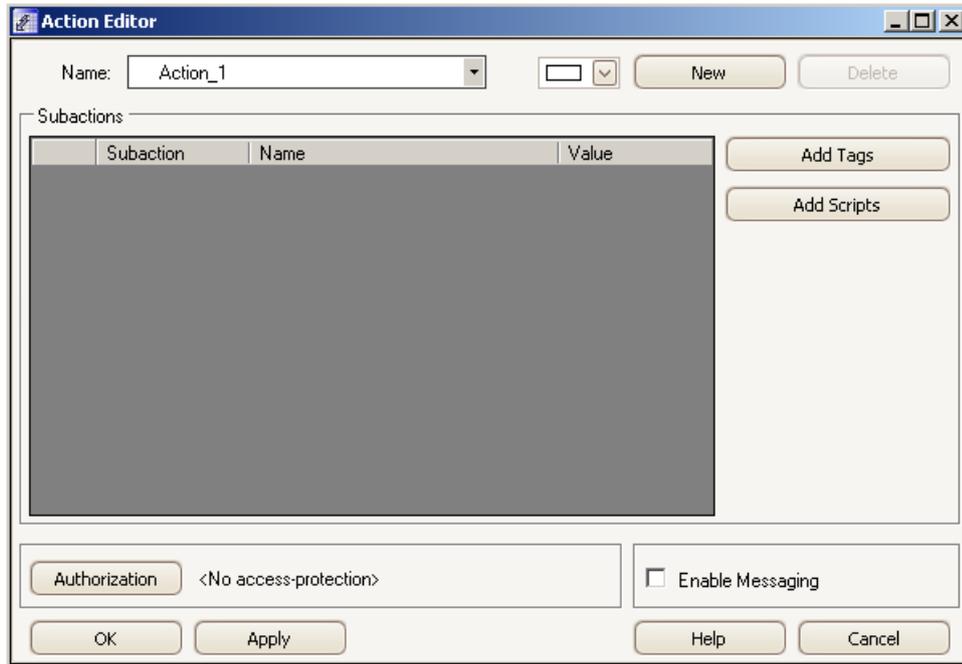
In this section, you will configure an action that sets a tag value.

Prerequisite

In WinCC Explorer, create a tag named "ToolPress" with the data type "Unsigned 16-bit value" in "Tag Management". This tag is used while creating an action. Information about tags is in the WinCC Information System under "Working with Tags".

Procedure

1. In the Calendar Options Editor, click "Edit > Actions". "Action Editor" window appears.

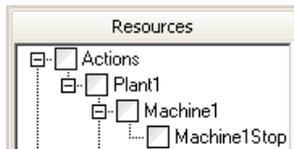


2. In the "Name" field, enter the action name.
To create an action in a group, enter the group name followed by a backslash "\" as separator and the action name.
Example: "Plant1\Machine1\Machine1Start".

- Click "Add Tags". In the "Tag Selection" dialog, select the "ToolPress" tag to link with the action. Click "OK".
The selected tag appears as a subaction.

Subactions		
Subaction	Name	Value
▶ Set Tag	ToolPress	

- Click in the "Value" field of this subaction and enter "45" as the tag value.
- Click "OK".
The configured action group and action displays in the "Resources" window of the Calendar Options Editor.



4.4.3 Creating an action schedule

Introduction

In this section, you will create a calendar to allow schedules to display in Runtime. You will create an action schedule to associate with this calendar. You will also configure the schedule to repeat multiple times.

Procedure

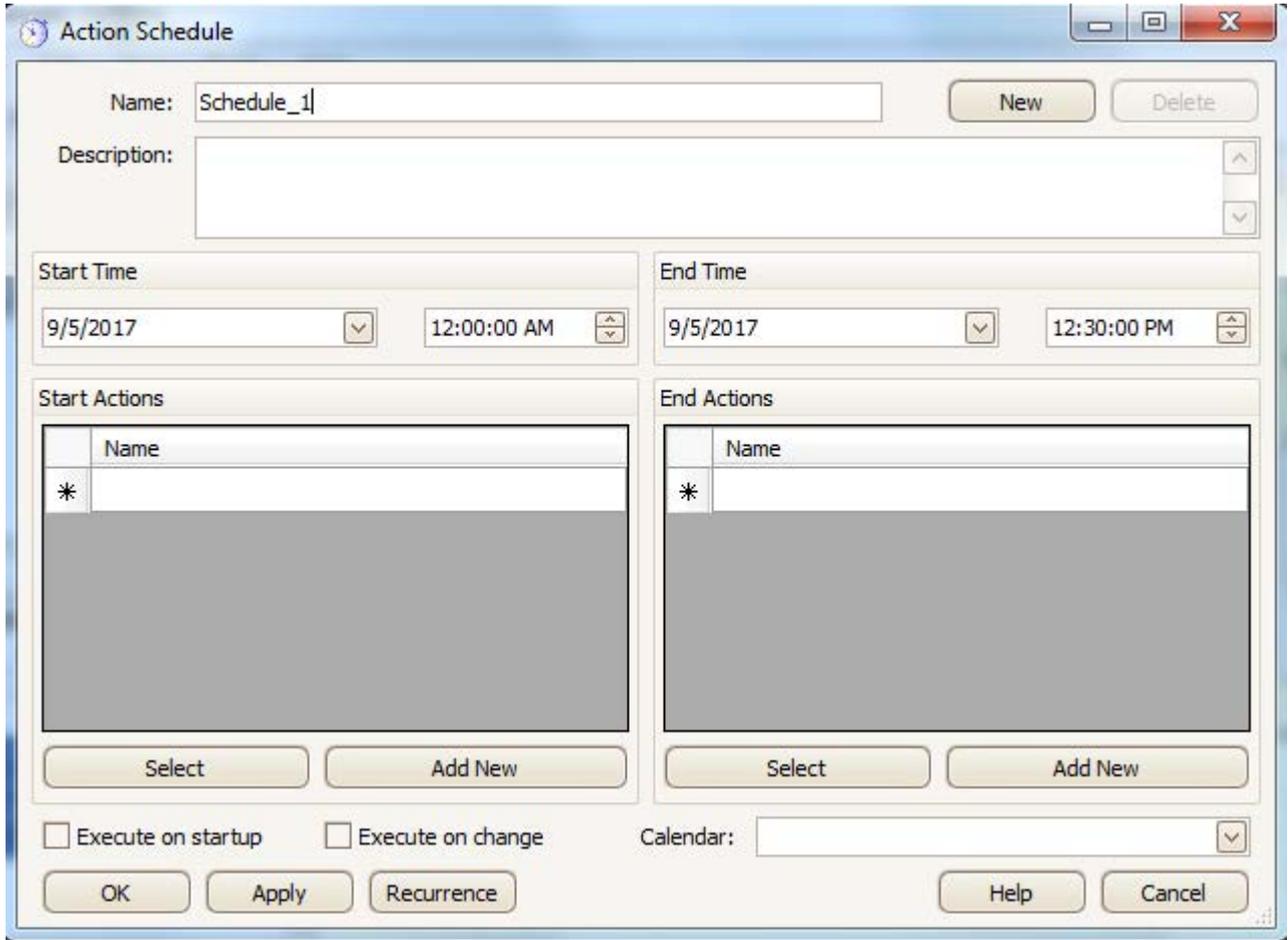
- Create a calendar:
 - In the Calendar Options Editor, click "Edit > Calendars". "Calendar List Editor" appears.



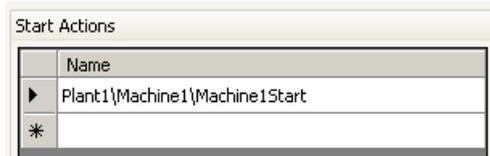
- Enter "Line1" as the calendar name. Click the color picker and choose a color, such as "light blue". Click "OK".
The calendar is displayed in the "Resources" window.
- Click "View > Day View", to change the view of the calendar to daily view.
 - Verify the action schedule preference is set by clicking "View > Preferences > Default Schedule Type > Action". This preference can be verified if both the Calendar Options are installed.
This preference causes the Action Schedule Editor to open when double-clicking a date or a time slot.

4.4 Scheduling an action

- 4. Double-click a time slot close to the current time of day to open the Action Schedule Editor. The time slot you clicked displays as the time the schedule will start and end.



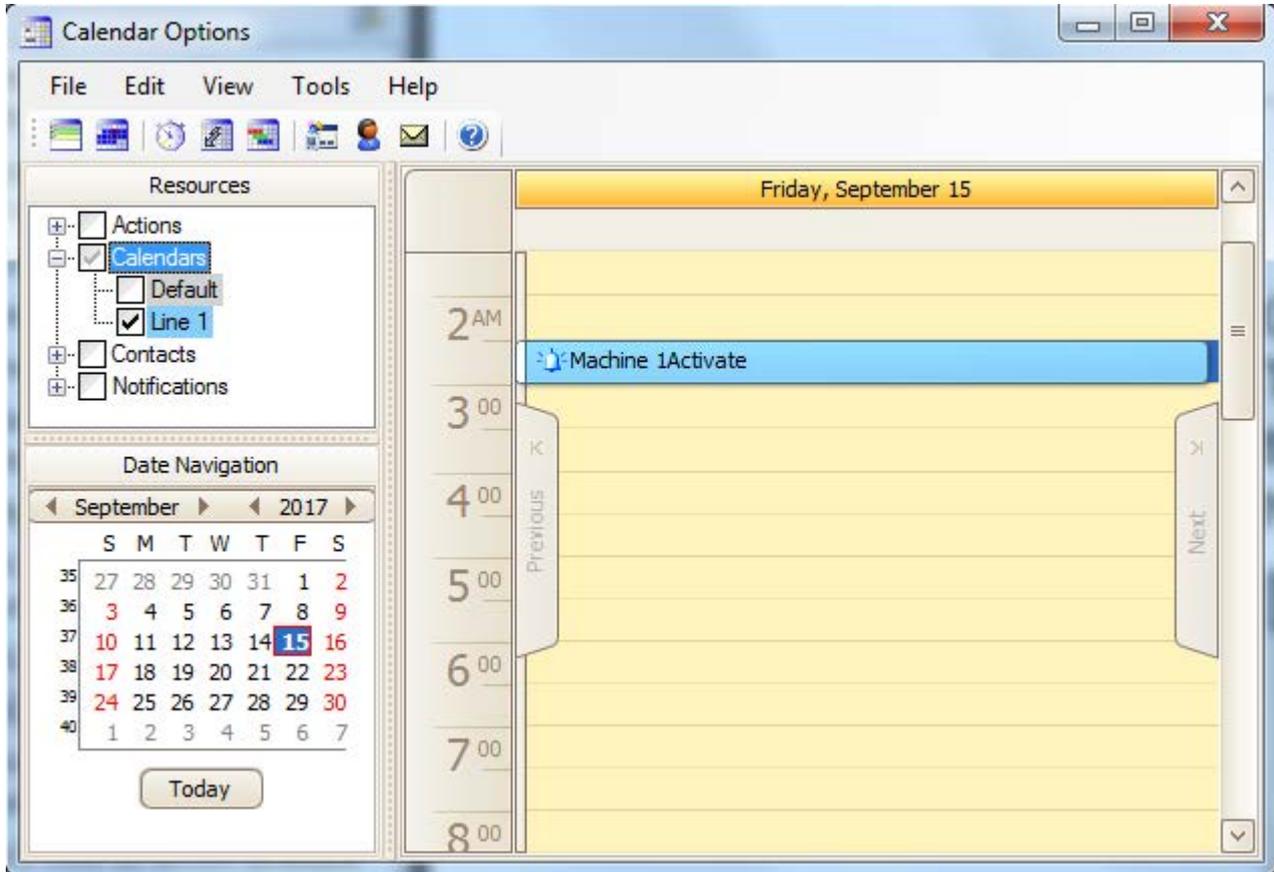
- 5. Enter "Machine1Activate" as the action schedule name.
- 6. Under "Start Actions" section, click "Select". Expand the group in the "Actions" list and select the "Machine1Start" action you created. The action displays under "Start Actions".



- 7. Click the "Calendar" drop-down list at the bottom and select "Line1" to associate the schedule with this calendar. Unselect "Default" to remove this calendar association.

8. Click "OK".

The schedule is displayed in the calendar at the specified time in the editor. If you do not see the schedule, verify the "Line1" calendar option is selected in the "Resources" window. The color of the schedule matches the color of the calendar.



9. To configure this schedule to repeat every weekday:

- Double-click the schedule to open the editor and click "Recurrence".
- Set the "Recurrence pattern" to "Daily" and "Every weekday". Click "OK" to save the schedule.
- Change the calendar to month view by clicking "View > Month View". The schedule displays on each weekday at the specified time. This schedule will execute 10 times because the "Range of recurrence" has a default setting of 10 occurrences.

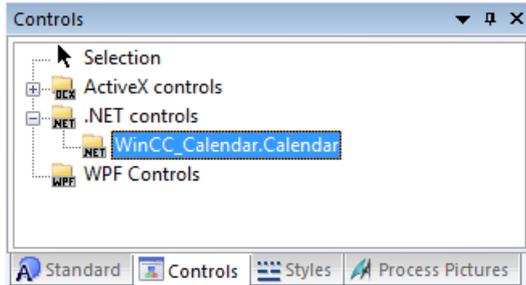
4.4.4 Adding Calendar Control to a picture

Introduction

In this section, you will insert the Calendar Control into a picture and configure the control to display the schedules in the calendar during Runtime. You will insert a bar graph and I/O field in the picture so that you can see the tag value of an action schedule is set at the specified time.

Procedure

1. In WinCC Explorer, open the Graphics Designer and create a picture.
2. Open the "Controls" tab available on the right side of the picture and select ".NET controls > WinCC_Calendar.Calendar".
3. Drag-and-drop the WinCC_Calendar.Calendar control onto the picture and resize as desired.

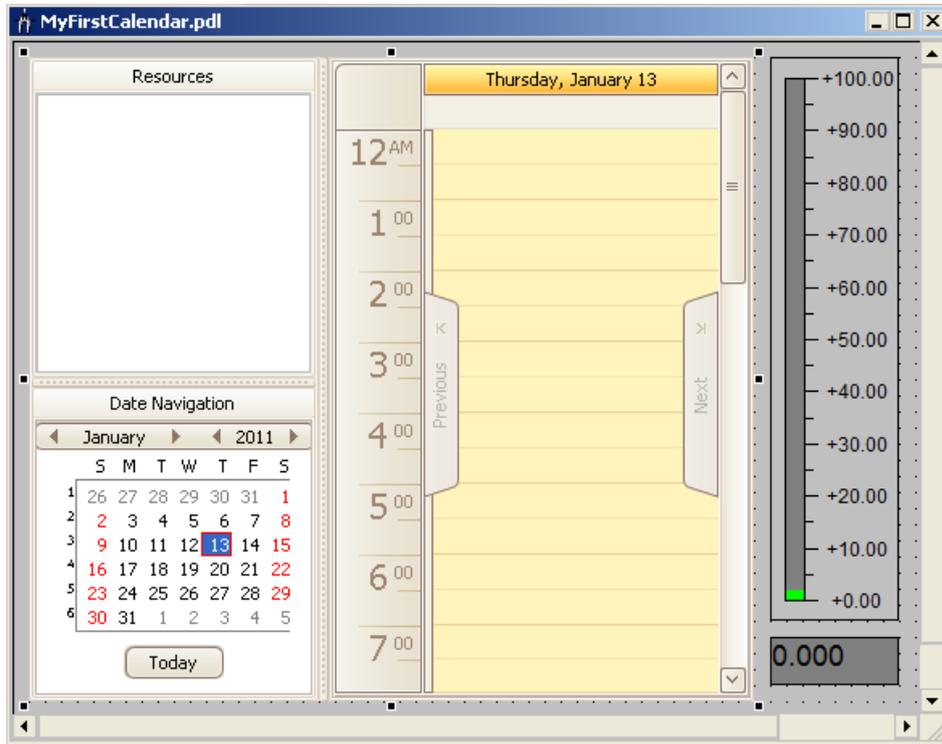


4. Open the "Standard" tab and select "Smart Objects > Bar".
5. Drag-and-drop the "Bar" object next to WinCC_Calendar.Calendar control in the picture. "Bar Configuration" window appears.
6. Select the "ToolPress" tag that you associated with the action referenced in the schedule for the "Tag" field.
7. Set the limits for the bar display to minimum = 0 and maximum = 100. This bar object will display the tag value when the schedule is executed.
8. Click "OK".
9. Under "Smart Object", drag-and-drop the "I/O Field" below the bar object. "I/O Field Configuration" window appears.
10. Select "ToolPress" tag for the "Tag" field. You will use this field in Runtime to reset the tag value so that you can see the schedule's tag value set again at the specified time.

11. Select the Calendar control and go to "Object Properties > Properties > Control properties". Set the following attributes:

Attribute	Value
ActiveViewType	Day
DefaultScheduleType	Action

12. Save the picture.
You have now designed and configured a Calendar Control to display schedules in Runtime.



4.4.5 Viewing an action schedule in Runtime

Introduction

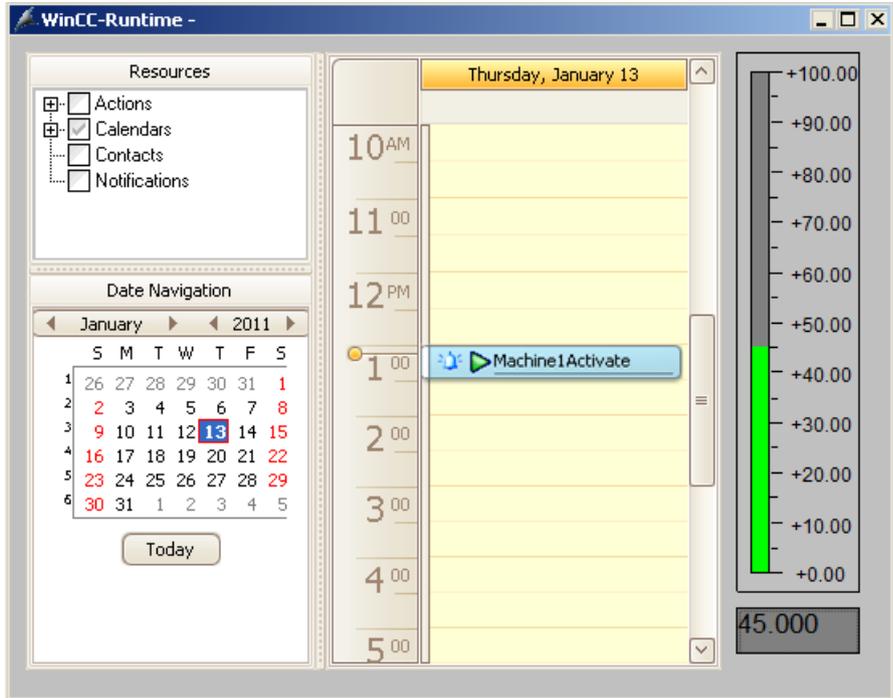
To see the results of action schedules, you can view the calendar during Runtime and observe that the tag value is set at the specified time. Using the sample calendar picture you configured, you can manually change the tag's value and the schedule's start time to execute the schedule again.

Procedure

1. In the Graphics Designer, click the "Activate" button to view the picture in Runtime.
2. Open your computer's system clock by double-clicking the time in the system tray. Position the clock and the Runtime picture so both are visible.

4.5 Scheduling notifications

3. In the calendar, scroll until the schedule is visible.
4. Double-click the schedule to open the Action Schedule Editor. Set the time to 1 minute after the current time and click "OK".
5. Watch the tag value change to the configured value at the specified time.



6. To reset the tag's value manually, enter a different value in the "I/O Field" box and repeat step 4 to make this schedule occur again. Each time the specified time is met, the bar graph changes to display the tag value entered in the schedule's action.

4.5 Scheduling notifications

4.5.1 Overview

This chapter provides instructions to create a notification schedule and see the results. Detailed information is available in WinCC documentation and WinCC/Event Notifier documentation.

In this demonstration, WinCC, Event Notifier Server, and Event Notifier Client are all installed on the same computer.

The chapters show you how to:

- Configure a test communication service to simulate the delivery of notification email to contacts and their replies.
- Create contacts and notifications.
- Create notification schedules to specify contacts to receive notification email.

- View and acknowledge notifications.
- View notification schedules at Runtime.

4.5.2 Configuring a test communication service

Introduction

To send a notification email, first you must configure a communication service that specifies how WinCC connects to the email service.

To simulate the delivery of notification email to contacts and their replies, you will need to configure the "Mail Simulator" in Communication Service Editor. "Mail Simulator" is provided for demonstration purposes only. You must configure your communication service for actual processing.

Procedure

1. In WinCC Explorer, expand "Calendar Options > Event Notifier". Double-click "Communication Service" to open the "Communication Service Editor".

The screenshot shows the "Communication Service" dialog box. It features a list box on the left with "Server01" selected. To the right, there are input fields for "Name" (Server01), "Email Address", "Type" (SMTP/POP3), and "Poll Rate" (30 Seconds). Below these are two sections: "Send" and "Receive". Each section has fields for "Server", "Port", "Login", "Password", and a "TLS" checkbox. At the bottom, there are buttons for "Add", "Remove", "Test", "Save", "Close", and "Help".

2. Enter "MailSimulator" as the communication service name.
3. Click the "Type" drop-down menu and select "Test Mailer".

4.5 Scheduling notifications

- 4. In the "Email Address" field, enter "notifier@mymailserver.com" as the mailbox on your email server.
The Event Notifier uses this mailbox to send notification email and to receive acknowledgments from the contacts.



- 5. Click "Save" and then click "Close".
"Mail Simulator" window opens.

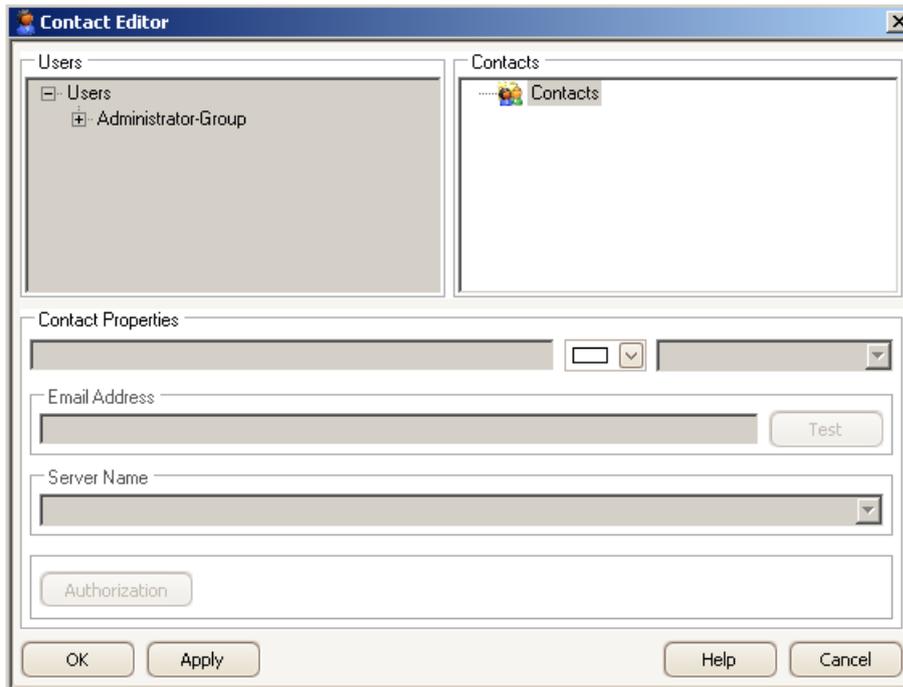
4.5.3 Creating contacts

Introduction

In this section, you will configure contacts to receive notification email. A 'Contact' is a WinCC user with a specified email address. The users created in "WinCC User Administrator" only can be used as a contact. Each contact will use the "MailSimulator" communication service to simulate the sending of notification email.

Procedure

1. In the Calendar Options Editor, click "Edit > Contacts".
The "Contact Editor" displays the users configured in the WinCC User Administrator.



2. Create WinCC users that can be used as contacts.
 - Right-click on the "Users" section area and select "User Administration". "User Administrator" window opens.
 - In "User Administrator", create the following user groups and users.

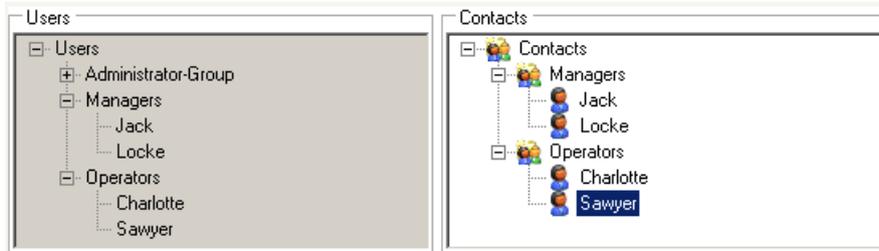
User Group	User	Authorizations
Managers	Jack	all authorizations except "Web Access - monitoring only"
	Locke	
Operators	Charlotte	<ul style="list-style-type: none"> • "Process controlling" • "Change picture" • "Window selection" • "Hardcopy" • "Confirm alarms"
	Sawyer	

Information about user administration is in the WinCC Information System under "Working with WinCC > Structure of the User Administration".

3. In Contact Editor, create contact groups with the same name as the user groups.
 - Under "Contacts", right-click and choose "Add Group". Enter "Managers" and press <Enter>.
 - Create another contact group named "Operators".

4.5 Scheduling notifications

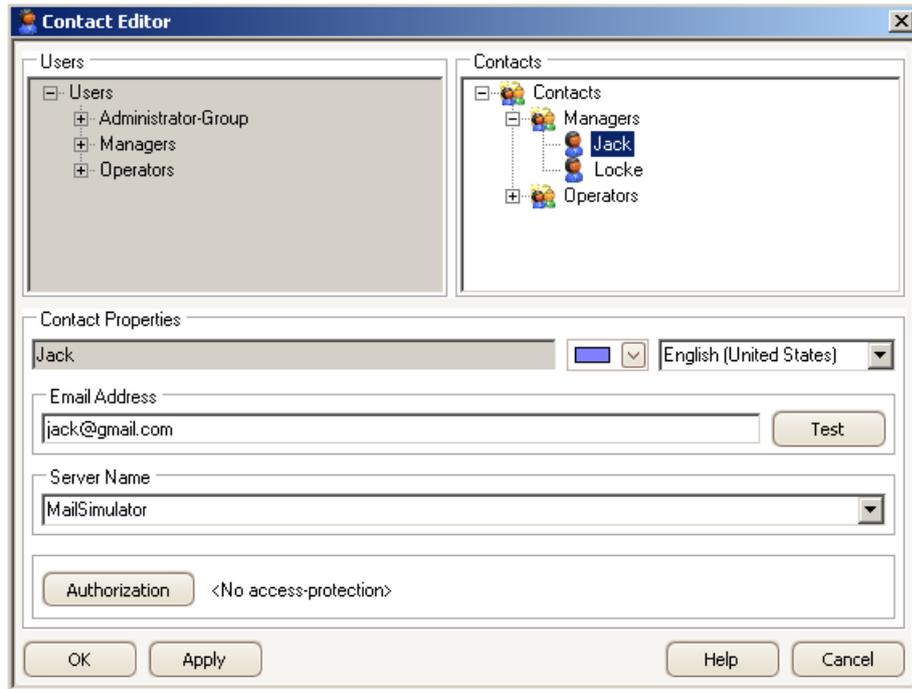
4. Drag-and-drop the users created under "Managers" group in the "Users" section onto the "Managers" group created in the "Contacts" section. Repeat the step to drag-and-drop users under "Operators" in the "Users" section to the "Operators" group in the "Contact" section.



5. For each contact, select the contact name and enter the contact properties.
 - Select "MailSimulator" as the "Server Name".
 - Enter the email address and select a color to associate with the contact. Click "Apply".

Contact	Color	Email
Jack	blue	jack@gmail.com
Locke	brown	locke@yahoo.com
Charlotte	yellow	charlotte@hotmail.com
Sawyer	orange	sawyer@gmail.com

The configuration for Jack will be:



- Click "OK".
The configured contacts display in the "Resources" window of the Calendar Options Editor.

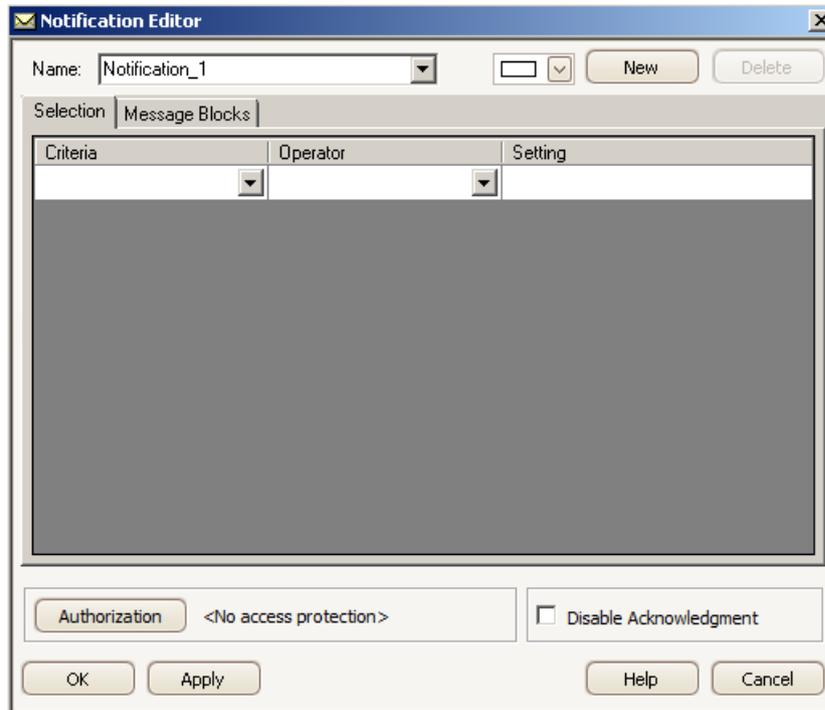
4.5.4 Creating notifications

Introduction

In this section, you will configure two notifications to filter configured alarm messages.

Procedure

1. In Calendar Options Editor, click "Edit > Notifications". The "Notification Editor" window opens.

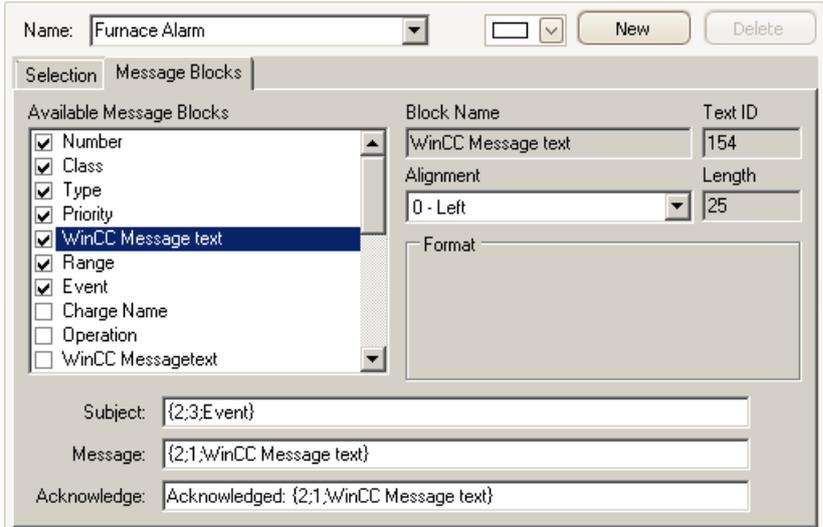


2. Enter "Furnace Alarm" as the notification name.
3. Under the "Selection" tab, enter the filter criteria:

Criteria	Operator	Setting
Event	equal to	Furnace

4.5 Scheduling notifications

- 4. Under the "Message Blocks" tab, use the message blocks to define the subject and body of the email:
 - Drag the "Event" message block to the "Subject" field.
 - Drag the "WinCC Message text" to the "Message" field.
 - Enter "Acknowledged:" and drag "WinCC Message text" to the "Acknowledge" field.



The message blocks are configured in WinCC Alarm Logging. Information about message blocks is in the WinCC Information System under "Working with WinCC > Setting Up a Message System > Configuring the Message System".

- 5. Click "Apply".
- 6. Click "New" and create another notification named "Infeed Alarm". Enter the same configuration used for the "Furnace Alarm", except enter "Infeed" in the "Setting" field.
- 7. Click "OK".
The configured notifications display in the "Resources" window.

4.5.5 Creating notification schedules

Introduction

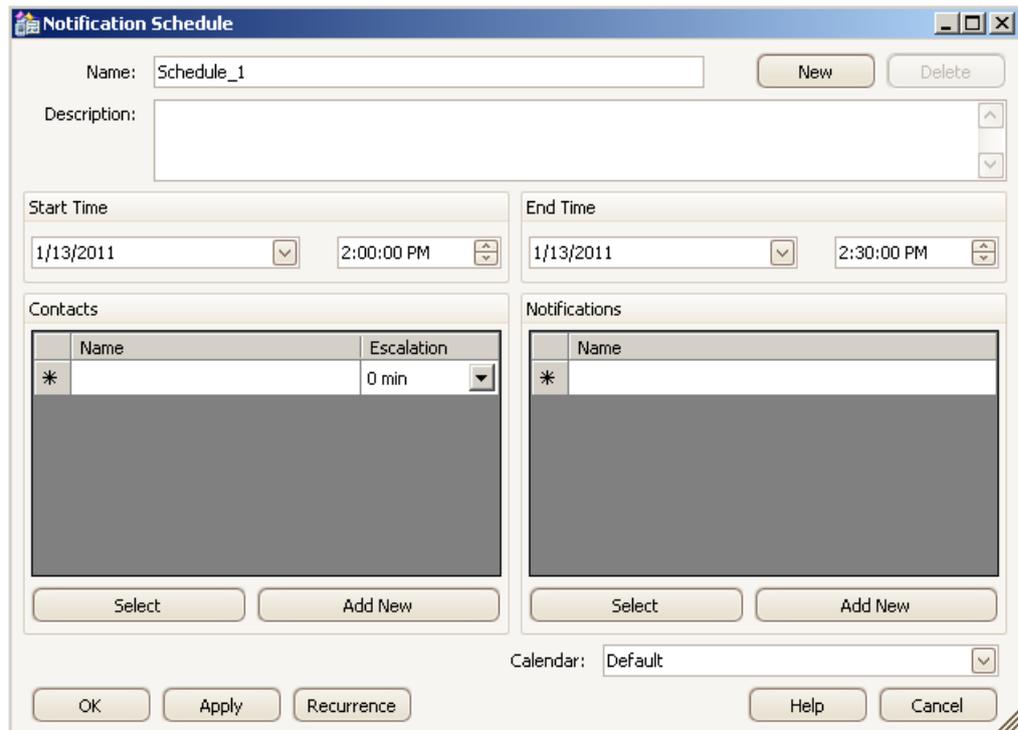
In this section, you will create a calendar to allow schedules to display in Runtime. You will create schedules to associate with this calendar. You will also configure the schedule to repeat multiple times.

Procedure

1. Create a calendar:
 - In the Calendar Options Editor, click "Edit > Calendars".



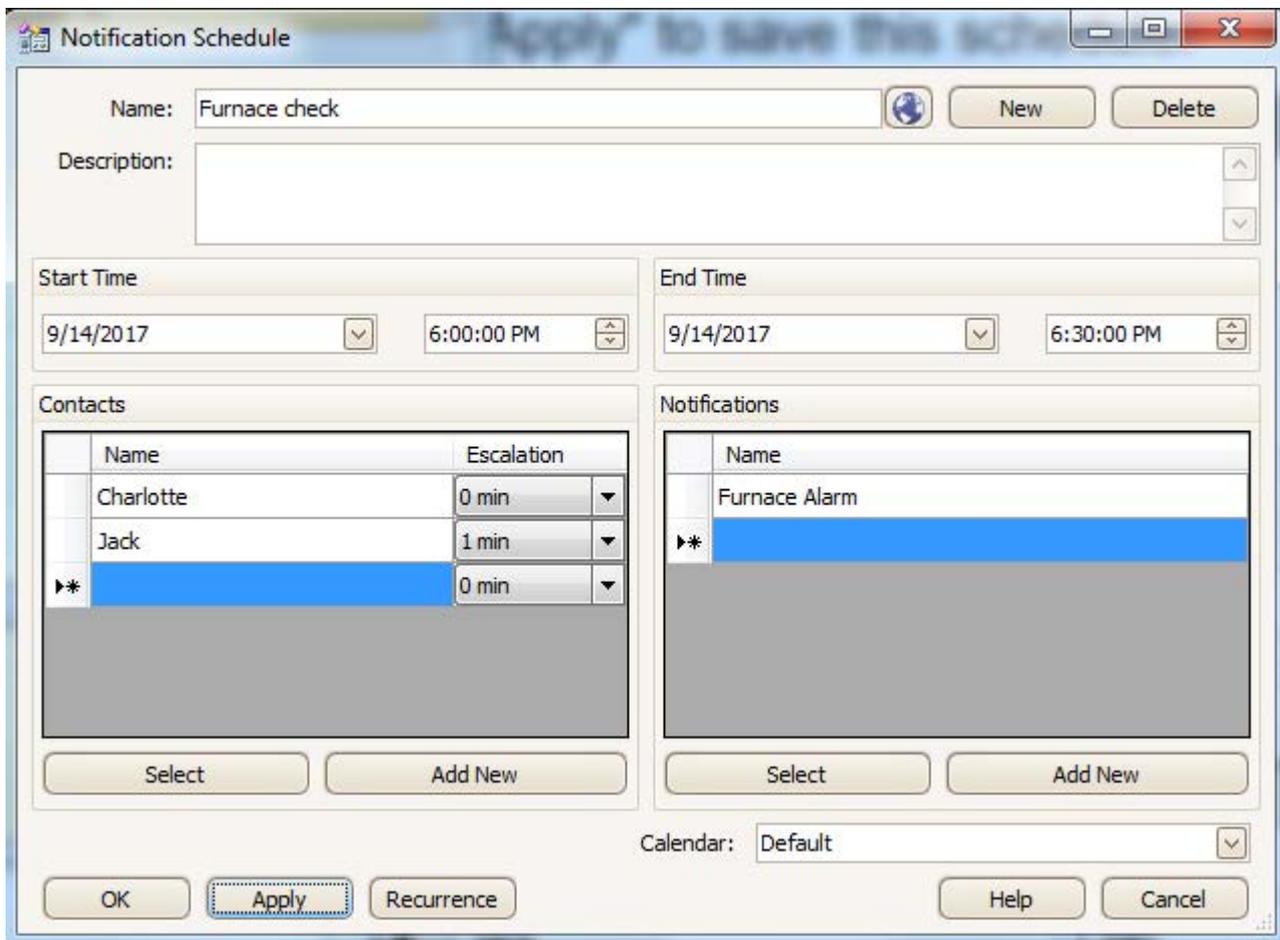
- Enter "Personnel" as the calendar name. Click the color picker and choose a color, such as "light green".
 - Click "OK". The calendar displays in the "Resources" window.
2. In the Calendar Options Editor, change the view of the calendar to daily by clicking "View > Day View".
 3. If both Calendar Options are installed, verify if the notification schedule preference is set by clicking "View > Preferences > Default Schedule Type > Notification". This preference causes the Notification Schedule Editor to open when double-clicking a date or time slot.
 4. Double-click a time slot close to the current time of day to open the Notification Schedule Editor. The time slot you clicked displays the time the schedule will start and end.



5. Enter "Furnace check" as the schedule name.

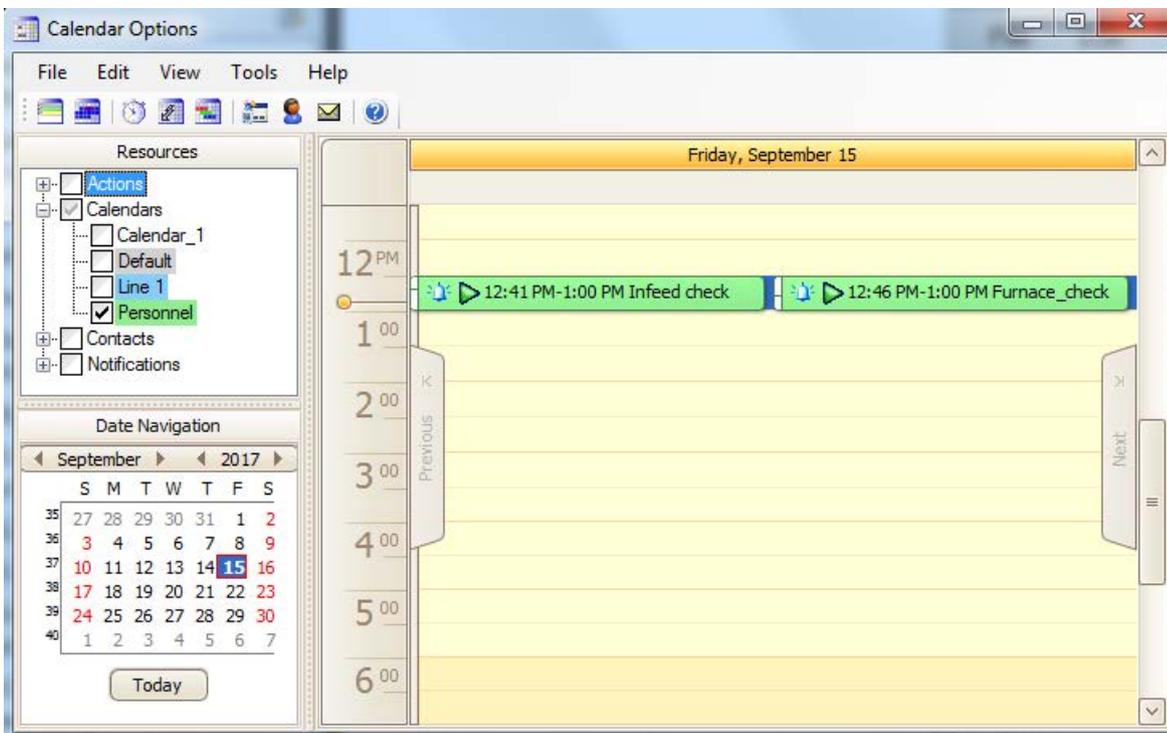
4.5 Scheduling notifications

6. Under "Contacts" section, choose the contacts for this schedule.
 - Click "Select". In the "Contacts" list, select operator "Charlotte" and manager "Jack" to receive the notifications.
 - Click "OK".
 - For "Jack", set the "Escalation" time to 1 minute.
This is the delay in time an alarm must remain unacknowledged before the contact is notified. A "0" value indicates the contact is notified immediately.
7. Under "Notifications" section, click "Select".
8. In the "Notifications" list, select "Furnace Alarm" and click "OK".
9. Click the "Calendar" drop-down below and select "Personnel" to associate the schedule with this calendar. Unselect "Default" to remove this calendar association.
10. Click "Apply" to save this schedule.



11. Click "New" and create another schedule that references contact groups.
 - Enter "Infeed check" as the schedule name.
 - Under "Contacts" section, click "Select" and select "Managers" and "Operators".
 - Click "OK".
 - Set the "Escalation" time for Managers to 1 minute.
 - Under "Notifications" section, click "Select" and select "Infeed Alarm".
 - Click "OK".
 - Associate this schedule with the "Personnel" calendar.
12. Click "OK".

The schedules display in the calendar as the color defined for the "Personnel" calendar. If you do not see the schedules in the calendar, verify the "Personnel" calendar is selected in the "Resources" window. If a schedule is not at the time you want, simply drag the schedule to the desired time.



13. To configure this schedule to repeat every weekday:
 - Double-click the schedule to open the editor and click "Recurrence".
 - Set the "Recurrence pattern" to "Daily" and "Every weekday". Click "OK" and then save the schedule.
 - Change the calendar to month view by clicking "View > Month View". The schedule displays on each weekday at the specified time. This schedule will execute 10 times because the "Range of recurrence" has a default setting of 10 occurrences.

4.5.6 Viewing and acknowledging notifications

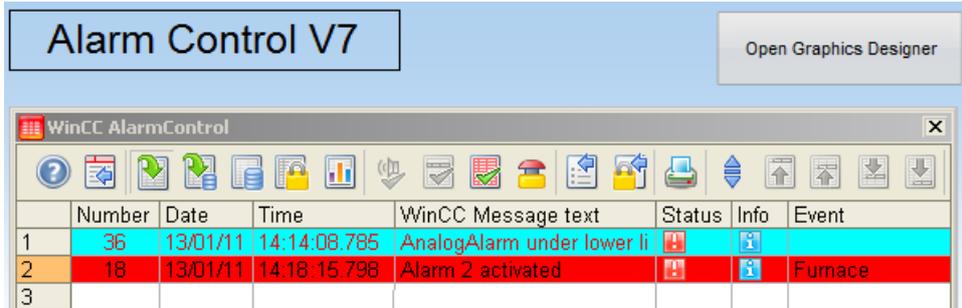
Introduction

In this section, you will activate the "DemoProjectV7.5 SP2" and set an alarm. You will see that the notification email is sent to appropriate contacts in the "Mail Simulator". You will let a contact acknowledge the notification. You will also set an alarm and let it escalate to the next contact.

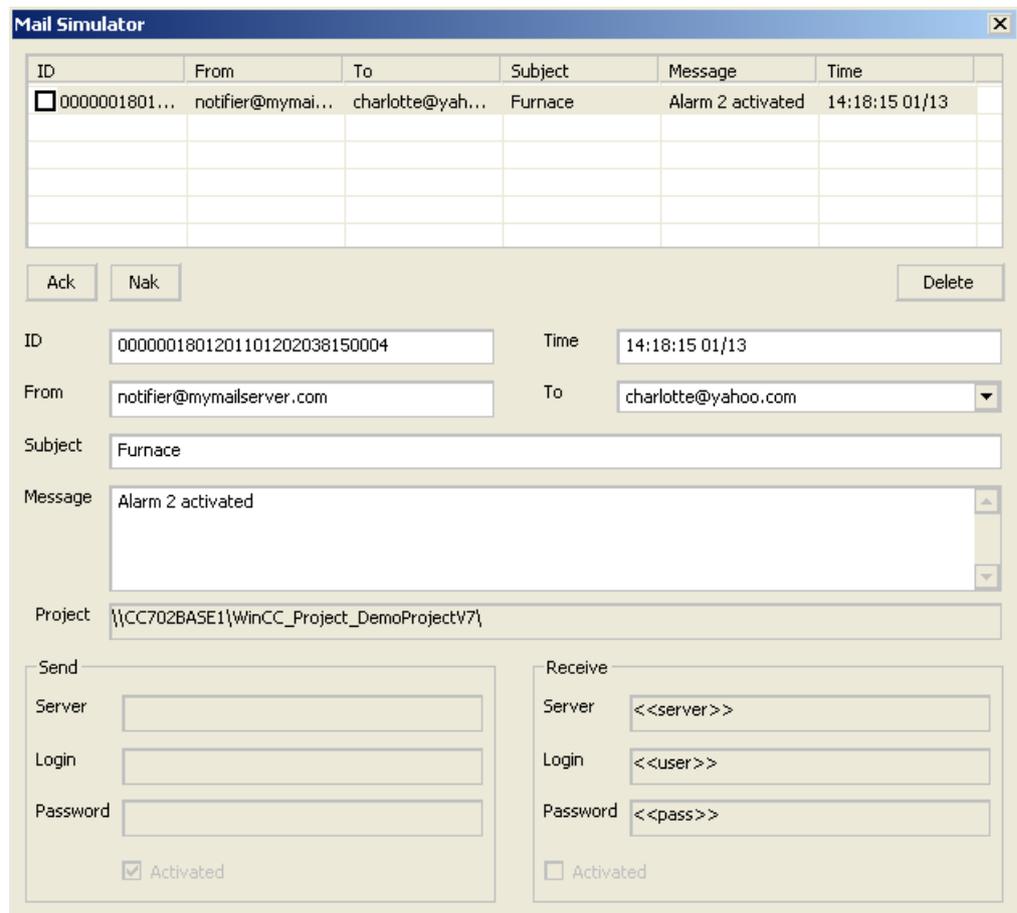
Procedure

1. In WinCC Explorer, activate "DemoProjectV7.5 SP2" to see the startup picture in Runtime. The "Mail Simulator" opens after the picture displays. You may need to reposition the dialog and the picture so that both the windows are visible on the screen.
2. In the picture, click "WinCC icon > Favorites > Tips & Tricks > Alarm Logging > AlarmControl Extra functions".

- Click "Set" to generate an alarm for "Alarm 2".
The message displays in the picture.

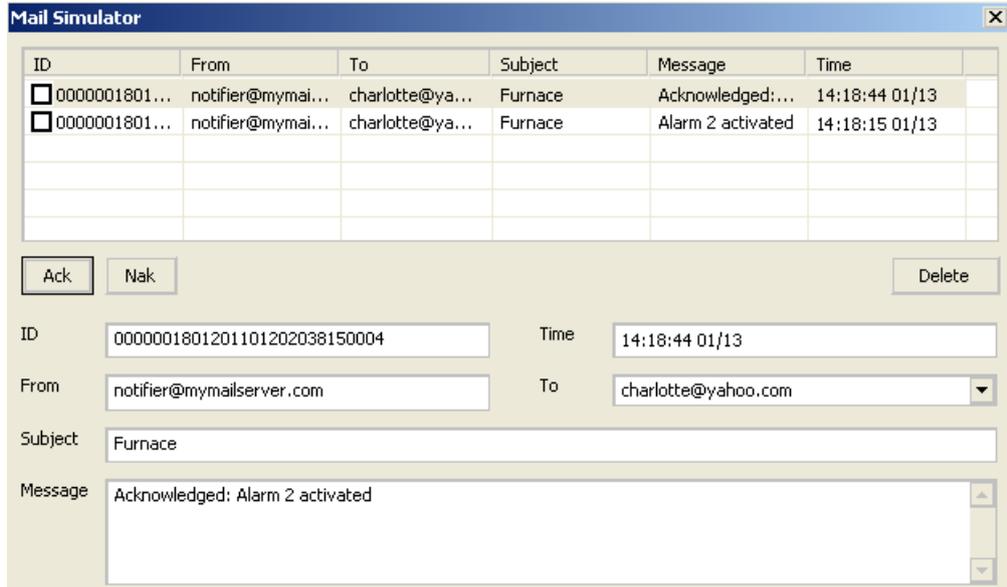


The "Mail Simulator" shows that "Charlotte" received the notification email.

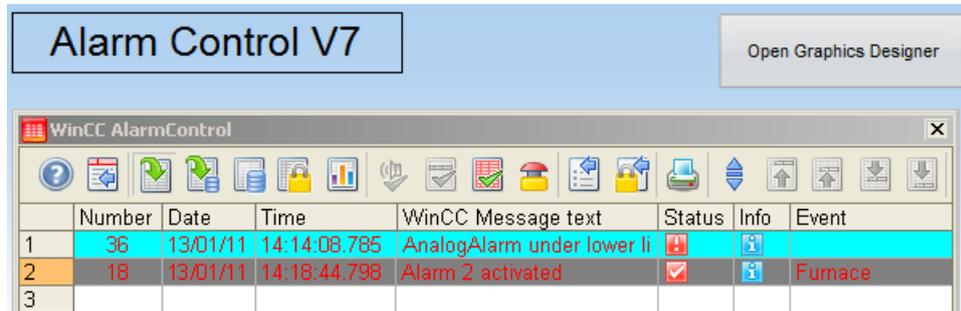


4.5 Scheduling notifications

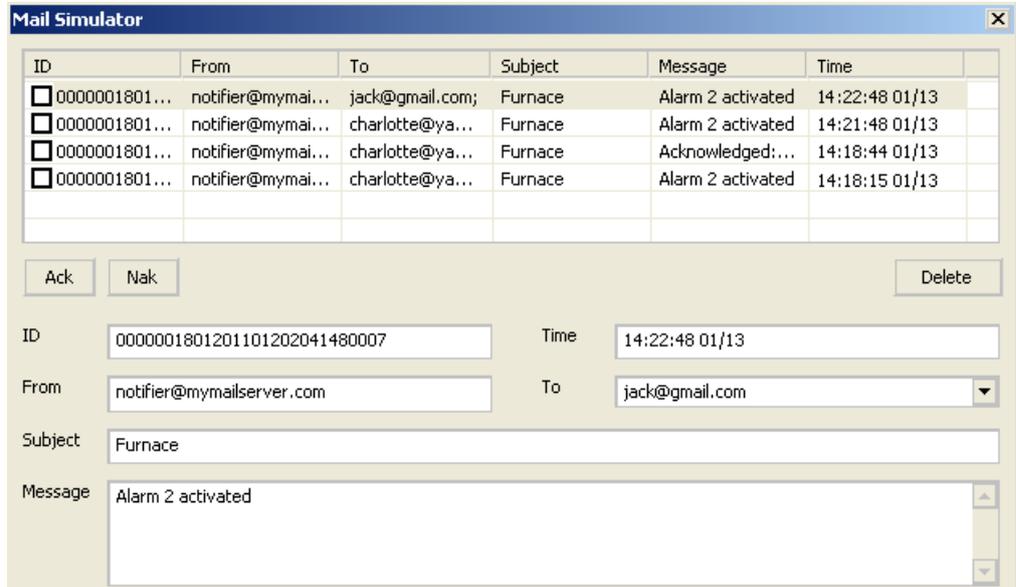
- 4. Select the notification email and click "Ack".
The "Mail Simulator" shows that the acknowledgment email is sent.



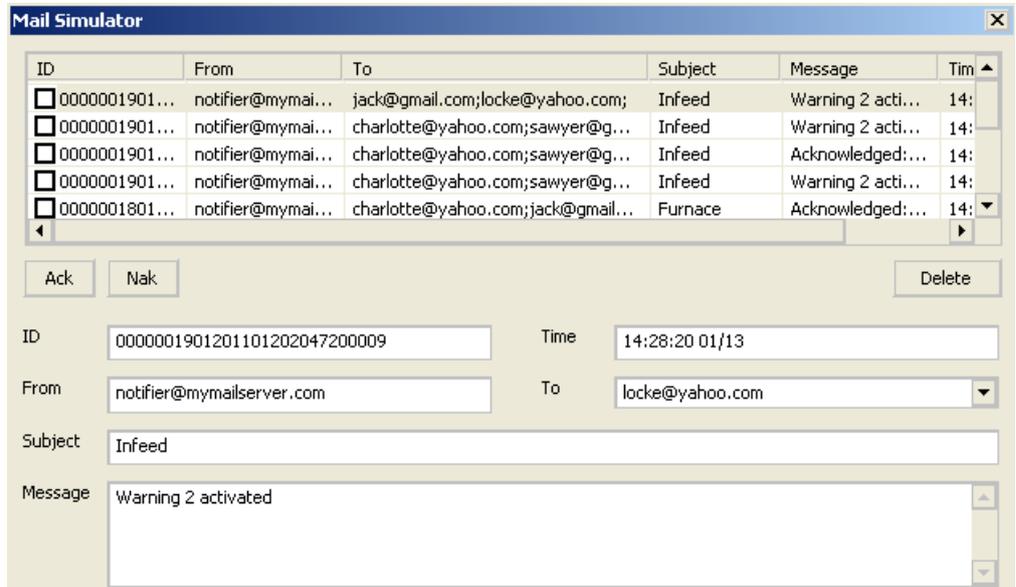
The alarm state in the picture changes to acknowledged.



5. Reset "Alarm 2" and then set it again. Wait at least 1 minute. The "Mail Simulator" shows that manager "Jack" received the notification email because "Charlotte" had not acknowledged the alarm within the escalation time.



6. Generate the "Warning 2" alarm to send notification email to both the operators. Either of the operators can acknowledge the alarm.
7. Generate the alarm again. Wait for 1 minute to see both managers receive the notification email.



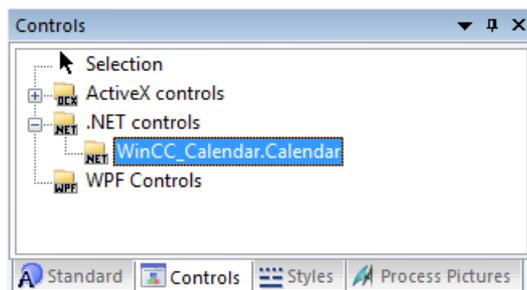
4.5.7 Viewing notification schedules in Runtime

Introduction

In this section, you will create a picture so that operators can view and create schedules. You will insert the Calendar Control into a picture and configure the control to display the schedules in the calendar.

Procedure

1. In WinCC Explorer, open Graphics Designer and create a picture.
2. Open the "Controls" tab available on the right side of the picture and go to ".NET controls > WinCC_Calendar.Calendar".

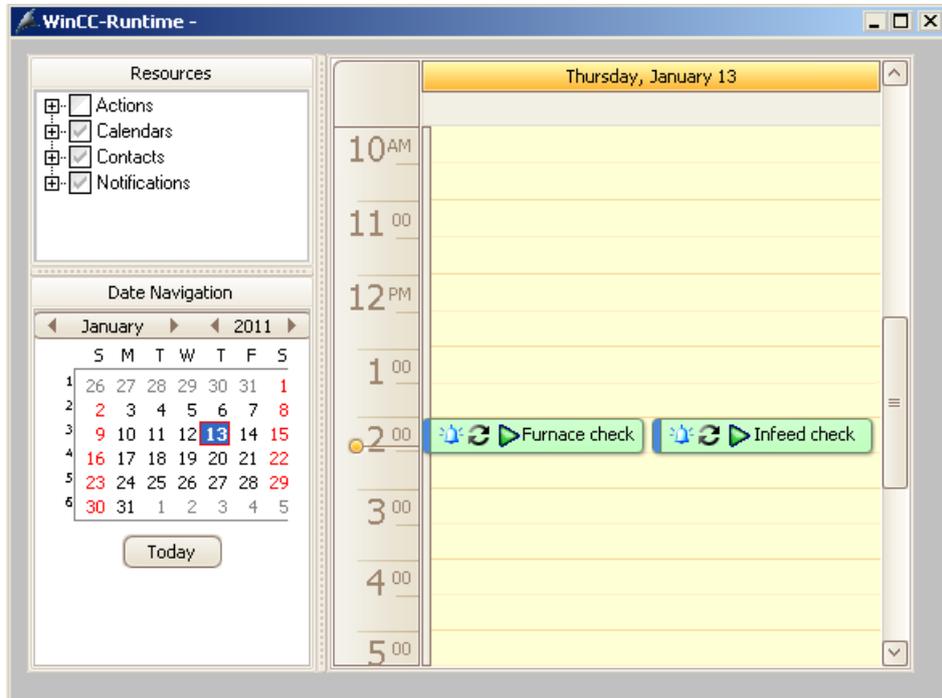


3. Drag-and-drop the Calendar control onto the picture and resize as desired.

- Double-click the control and go to "Object Properties > Properties > .NET Control > Control properties" and set the following attributes:

Attribute	Value
ActiveViewType	Day
DefaultScheduleType	Notification
SelectedCalendar	Personnel

- Save the picture. Click the "Activate" button to view the picture in Runtime



WinCC/Calendar Scheduler Documentation

5.1 Introduction

The Calendar Scheduler is a WinCC option that provides an easy way to manage time-based activities for controlling automated processes that WinCC supervises. You can easily create schedules to execute actions at desired times.

With the WinCC/Calendar Scheduler, you can:

- Easily set WinCC tag values or run global scripts at specified times to drive real world I/O and turn equipment on and off.
- Secure operator scheduling through user authorizations.
- Create recurring schedules with overrides for holidays or maintenance activities.
- Choose the system configuration where this option is installed: WinCC Client/Server, multi-user systems, redundant systems, and WebNavigator.

5.2 Calendar Options

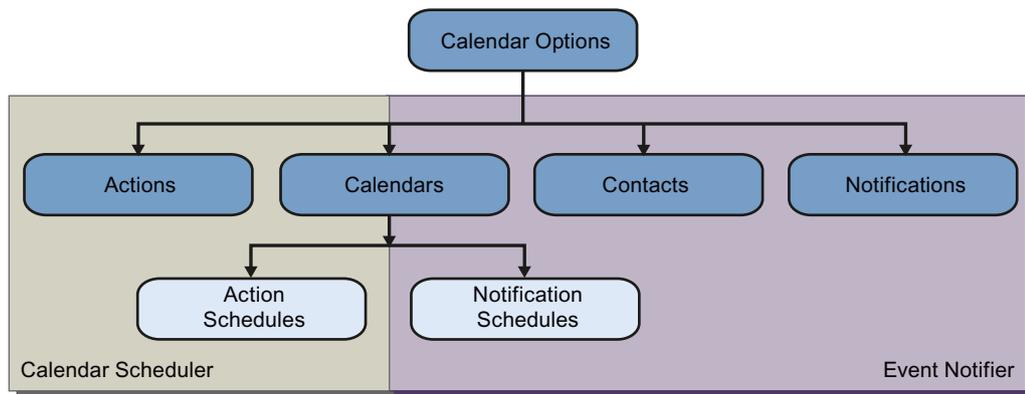
5.2.1 How Calendar Options work

Structure

The WinCC/Calendar Options include the WinCC/Calendar Scheduler and the WinCC/Event Notifier. A license is required for each option. The entry "Calendar Options" appears in the WinCC Explorer after the installation.

The Calendar Options share components. Only the functionality for the installed option is available. When both options are installed, the functionality of both options is available. The following diagram shows the relationship of editors used when configuring the Calendar Scheduler and the Event Notifier. Light blue indicates Runtime.

5.2 Calendar Options



Each Calendar Option has a calendar that serves as a named grouping of action schedules or notification schedules. The Calendar Scheduler has action schedules that reference one or more actions that will execute when the schedule starts and ends. The Event Notifier has notification schedules that specify a start and end time when a list of referenced contacts can be sent alarms that match the referenced notifications.

Calendar Options components

The Calendar Options consist of server and client components that can be installed together on the same computer. These components can be installed across multiple computers in the WinCC Client/Server, multi-user, redundant, and WebNavigator system configurations.

Calendar Options Editor

The Calendar Options Editor is accessed from the WinCC Explorer. The Calendar Options Editor is used to set up or edit a WinCC project's Calendar Scheduler or Event Notifier configuration.

The Calendar Scheduler lets you create schedules to execute actions. The Event Notifier lets you create schedules to send email notifications to specified contacts when WinCC alarm messages match the configured notification criteria. You would set an authorization on an action, notification, or contact to prevent unauthorized use by operators.

Calendar Scheduler Server

The Calendar Scheduler Server runs as a background service on each WinCC Server in the project executing the configured activities. The Calendar Scheduler Server starts when the WinCC project is activated in Runtime and stops when Runtime is deactivated.

The Calendar Scheduler follows the same redundancy model as other WinCC functions. The Calendar Scheduler Servers start on both WinCC Servers. Only the server located on the active server executes actions. During a server switch, the standby server becomes active and executes the actions.

Configuration data (actions and calendars) is synchronized manually between the redundant servers. For information, see the WinCC Information System under "Working with WinCC >

Working with Projects > Copying and Duplicating Projects". Runtime data (schedules) is synchronized automatically.

Note

Time synchronization between the pair of redundant WinCC servers is essential for correct operation.

Note

In Runtime, making changes from the standby server is not supported in this version. You can only make changes on the master server.

Event Notifier Server

The Event Notifier Server runs as a background service on each WinCC Server in the project sending the configured notifications to the scheduled contacts. The Event Notifier Server starts when the WinCC project is activated in Runtime and stops when Runtime is deactivated. The Event Notifier Server loads the configuration information at startup and loads any operator changes immediately.

The Event Notifier follows the same redundancy model as other WinCC functions. The Event Notifier Servers start on both WinCC Servers. Only the server located on the active server sends emails. During a server switch, the standby server becomes active without loss of Event Notifier data. For example: A contact who received an email from the primary server is allowed to acknowledge the email after a switch to the secondary server.

Configuration data (notifications, contacts, and calendars) is synchronized manually between the redundant servers. For information, see the WinCC Information System under "Working with WinCC > Working with Projects > Copying and Duplicating Projects". Runtime data (schedules) is synchronized automatically.

Note

Time synchronization between the pair of redundant WinCC servers is essential for correct operation.

Note

In Runtime, making changes from the standby server is not supported in this version. You can only make changes on the master server.

Calendar Control

The Calendar Control can be placed into one or more WinCC pictures using the WinCC Graphics Designer. You would configure this control to display and manage the subset of schedules specific to the portion of the application's process used in the picture.

A server package cannot be imported or deleted while a WinCC Client is running. The Calendar Option servers do not recognize the imported or deleted package because the Calendar Control reads at startup.

Calendar Scheduler in Runtime

In Runtime, operators use the Calendar Control to view and manage the time-based activities. Operators can create and edit action schedules only with the preconfigured actions they are authorized to use.

When operators attempt to select an action they are not authorized to use, they receive the "Insufficient permission" message. When they attempt to edit action schedules that contain at least one unauthorized action, the schedule remains unchanged at its preconfigured date and time.

Event Notifier in Runtime

In Runtime, operators use the Calendar Control to view and manage the scheduling of personnel to receive email when a new alarm matches the configured notifications. Operators can create and edit notification schedules only with the preconfigured notifications and contacts they are authorized to use. If configured to do so, operators can create and edit contacts and contact groups.

When operators attempt to select a notification or contact they are not authorized to use, they receive the "Insufficient permission" message. When they attempt to edit notification schedules that contain at least one unauthorized notification or contact, the schedule remains unchanged at its preconfigured date and time.

Time display format

The Calendar Scheduler Server and the Event Notifier Server save the date and time in the UTC (Coordinated Universal Time) format. The Calendar Options Editor and Calendar Control display time based on the local time setting of the client computer. This allows multiple operators using WinCC systems with clients located in different time zones to view and manage schedules in their own time.

Alternate terminology

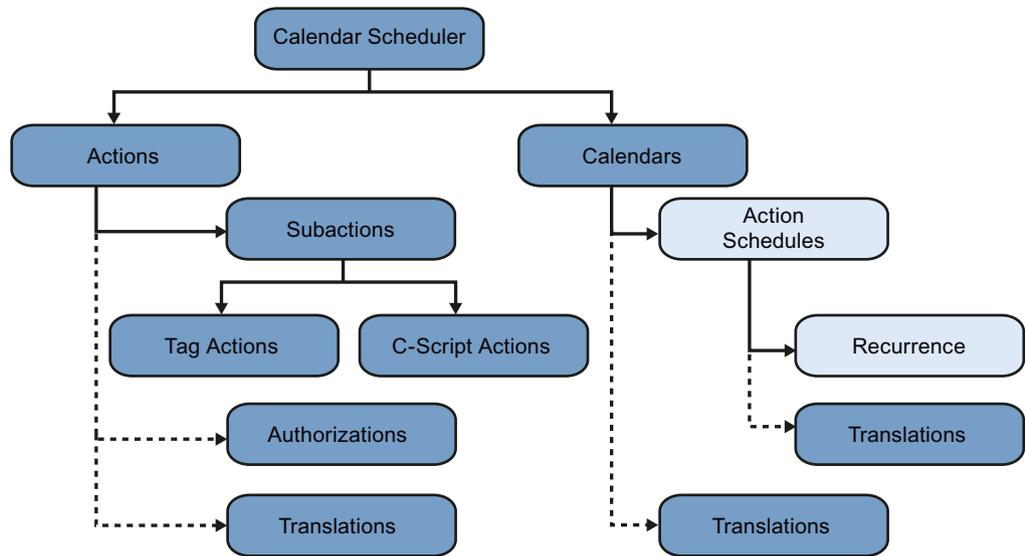
Throughout the documentation, alternate terminology may be used to represent names where functionality is the same in the Calendar Options.

Terminology	Calendar Scheduler	Event Notifier
schedule	action schedule	notification schedule
resource	action, calendar	notification, contact, contact group, calendar

5.2.2 Calendar Scheduler

Structure

The Calendar Scheduler lets you create schedules to execute actions. The following diagram shows the relationship of editors and dialogs used when configuring the Calendar Scheduler. Light blue indicates Runtime.



- "Calendar": Serves as a named grouping of configured action schedules. Optionally, a calendar name can have translated text.
- "Action Schedule": References one or more actions that will execute when the schedule starts and ends (if configured). Optionally, the schedule can be defined to reoccur, and the schedule name can have translated text.
- "Action": Contains at least one subaction. A subaction represents either a tag setting or C-script execution. Optionally, an action can have a security authorization, and the action name can have translated text.

Workflow

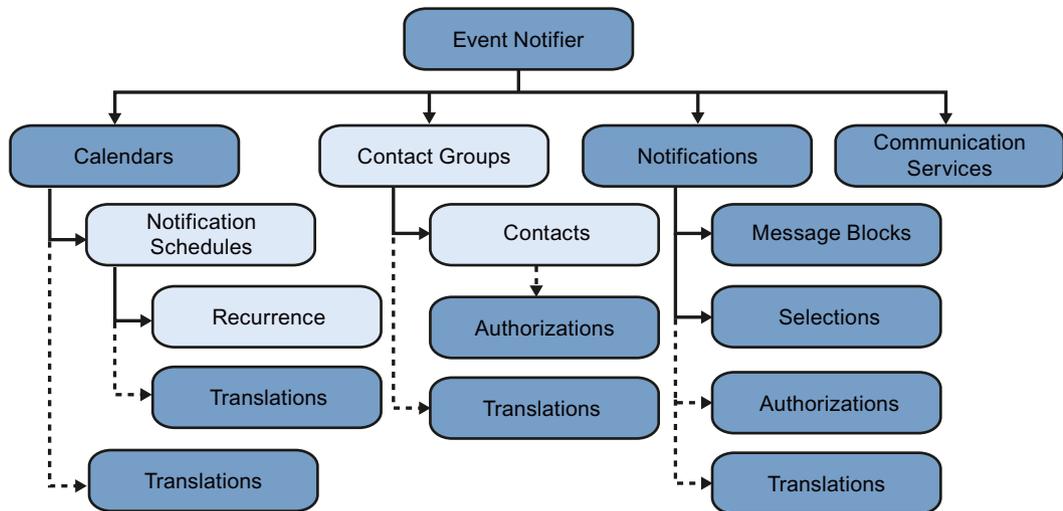
In a typical WinCC project, you would configure all the actions necessary to control the process, independent of the action schedules. In each action, enter a descriptive name for each of the project's languages and select the user authorization necessary to create a schedule using the action.

During Runtime, operators can create and edit schedules that execute actions for which they are authorized.

5.2.3 Event Notifier

Structure

The Event Notifier lets you create schedules to send email notifications to specified contacts when WinCC alarms or messages match the configured notification criteria. The following diagram shows the relationship of editors and dialogs when configuring the Event Notifier. Light blue indicates Runtime.



- "Calendar": Serves as a named grouping of configured notification schedules. Optionally, a calendar name can have translated text.
- "Notification Schedule": Specifies a time frame that the referenced "Contacts" or "Contact Groups" can be sent alarms that match the referenced "Notifications". Associated with each contact is an "Escalation" time that the alarm must remain unacknowledged before the contact is notified. Optionally, the schedule can be defined to reoccur, and the schedule name can have translated text.
- "Contact": Specifies an individual that can be sent notifications. Each contact is a WinCC user with a specified email address. Each contact identifies a communication service through which notification email is sent. Optionally, a contact can have a security authorization. A "Contact Group" is a list of contacts. Messages may be sent to all contacts in the contact group. Optionally, a contact group name can have translated text.
- "Notification": Identifies a set of alarms or other WinCC messages. Each notification contains message blocks and selection filter criteria to use for the alarm output. The configuration defines the information to send when an alarm occurs. Optionally, a notification can have a security authorization, and the notification name can have translated text.
- "Communication Service": Specifies how WinCC is to connect to the email server or other communication service that will deliver notification email to contacts and their responses to the email. Multiple services can be configured.

Workflow

In a typical WinCC project, you would:

1. Configure a communication service during initial project setup.
2. Configure the notifications and contacts necessary for your application, independent of the notification schedules.
 - In each notification, enter a descriptive name for each of the project's languages. Select the user authorization necessary to create schedules using the notification.
 - In each contact group, enter a descriptive name for each of the project's languages. Drag contacts to the contact groups.
 - In each contact, enter its email address and server name. Select the user authorization necessary to create schedules using the contact.

During Runtime, operators can create and edit schedules using contacts and notifications for which they are authorized. Occasionally, operators may be allowed to create and edit contacts and contact groups. WinCC alarm messages that match the notifications in the active schedules may be sent to the specified contacts. Messages are sent to a contact only if the alarm is not acknowledged before the contact's configured escalation time.

5.2.4 Calendar Options System Tags

Calendar Options has the following system tags. These tags are displaying specific message/information for an action or event at runtime. These tags will be created as "internal tag" and are part of the "Calendar" group in WinCC Tag Management.

@CalendarMsg

This tag holds the string value for information related to an appointment (while creating/Modifying/deleting) and resources (Calendar changed/Notification changed/contact changed/action changed). The message string contains information such as appointment status, machine name, and event name.

@EventMsg

This tag holds the string value of an initiated events. The message string contains information such as machine name, server status (server up/server initialized), event status (start executed/stop executed), appointment Id, and appointment subject.

@ExecuteMsg

This tag holds the string value of an executed action/sub-action. The message string contains information such as system Id, executed action/sub-action, executed action/sub-action Id.

@SynchronizeMsg

This tag holds the string value of the synchronized events. The message string contains information related to the synchronization of data of the actual server machine to redundant server machine

5.3 Working with Calendar Scheduler

5.3.1 Opening the Calendar Options Editor

Introduction

The Calendar Options Editor can be started only for the project currently open in the WinCC Explorer. The Calendar Options Editor contains elements of the Calendar Scheduler and the Event Notifier when both options are installed. If only one option is installed, the editor provides the elements of the installed option.

Procedure

You can open the Calendar Options Editor in the navigation window of WinCC Explorer in the following ways:

- Right-click "Calendar Options" and choose the installed option: "Open Calendar Scheduler" or "Open Event Notifier".
- Expand "Calendar Options" and double-click the installed option: "Calendar Scheduler" or "Event Notifier".
- Expand "Calendar Options" and select "Calendar Scheduler". In the data window, right-click "Action Schedule" and choose "Open".
- Expand "Calendar Options" and select "Event Notifier". In the data window, right-click "Notification Schedule" and choose "Open".

Note

The option you select determines which schedule type to open when double-clicking a date or time slot. The default schedule type for Calendar Scheduler is "Action". The default schedule type for Event Notifier is "Notification".

Results

The Calendar Options Editor starts and a calendar is opened in the data window. A list of all available resources is visible. The month view displays the first time this editor is opened. If you change the calendar view, that view will display anytime the editor is opened.

5.3.2 Calendar Options Editor

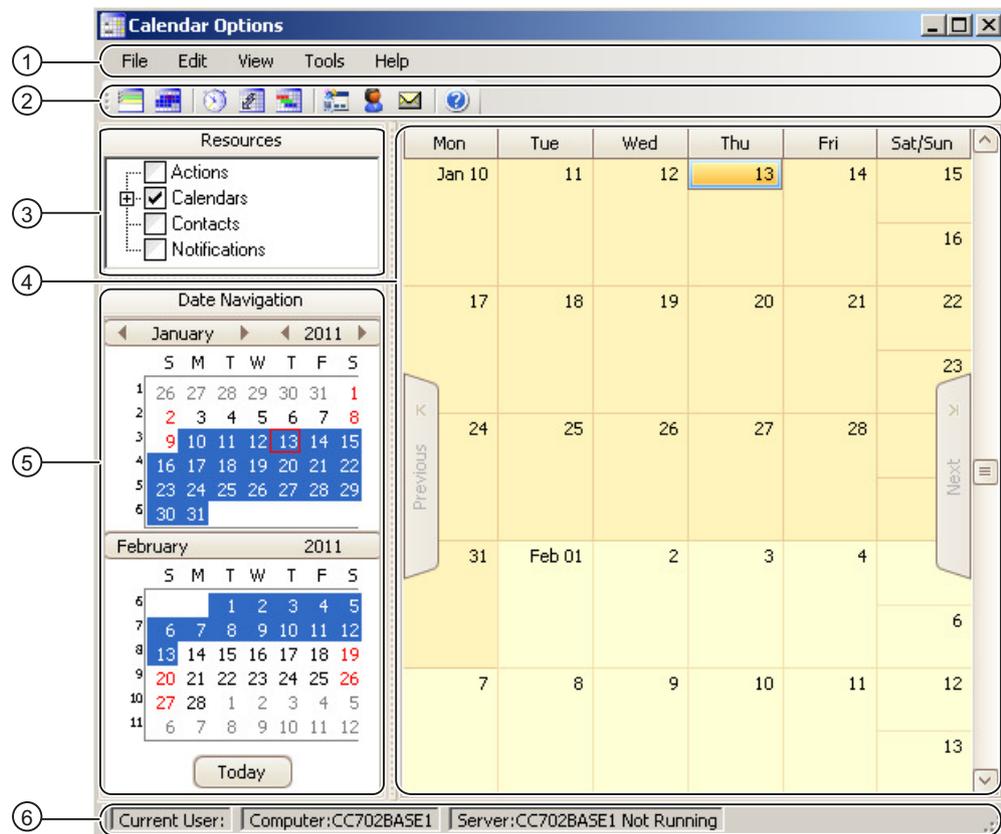
5.3.2.1 Calendar Options Editor elements

Introduction

When you start a Calendar Option in WinCC Explorer, the Calendar Options Editor is opened. The Calendar Options Editor is used to configure a project's initial time-based activities in the Calendar Scheduler or time-based scheduling of personnel to receive notifications in the Event Notifier. Only the elements of the installed Calendar Option display.

Elements of the Calendar Options Editor

The user interface of the Calendar Options Editor consists of the following elements:



- ① Menu bar
- ② Toolbar
- ③ Resources window
- ④ Data window
- ⑤ Date Navigation window
- ⑥ Status bar

5.3.2.2 Menu bar

Introduction

The menu bar includes the commands that you can use in the Calendar Options Editor. Some commands can be activated using the key combinations (shortcut keys). The following tables provide brief information on the commands in the menu bar.

Only the menu commands of the installed Calendar Options are visible.

File menu

The File menu includes one command:

Command	Key combination	Function
Exit	<Alt+F4>	Closes the Calendar Options Editor.

Edit menu

The Edit menu includes the following commands:

Command	Key combination	Option	Function
Action Schedules	<Ctrl+N>	C	Opens the Action Schedule Editor with the next default, unconfigured action schedule name displaying.
Actions	---	C	Opens the Action Editor with the next default, unconfigured action name displaying.
Calendars	---	C E	Opens the Calendar List Editor with the next default calendar name displaying.
Notification Schedules	<Ctrl+N>	E	Opens the Notification Schedule Editor with the next default, unconfigured notification schedule name displaying.
Contacts	---	E	Opens the Contact Editor with the list of WinCC users and groups displaying so you can create contacts and contact groups.
Notifications	---	E	Opens the Notification Editor with the next default, unconfigured notification name displaying.

"C": Visible when Calendar Scheduler is installed.

"E": Visible when Event Notifier is installed.

View menu

The View menu includes the following commands:

Command	Key combination	Function
Day View	---	Displays all schedules in a 24-hour day format for the selected day.
Work Week View	---	Displays all schedules in a 5-day week, 24-hour day format. A work week contains Monday through Friday and begins with the selected Monday or with the Monday prior to the selected day or date range.
Week View	---	Displays all schedules for the selected week. A week includes all 7 days of the week and begins with the selected Monday or with the Monday prior to the selected day or date range.
Month View	---	Displays all schedules in a monthly format. A month begins with the week containing the selected day or date range.
Timeline View	---	Displays all schedules in a timeline format. A timeline highlights 15 days and begins with the selected day or first day of a date range.
Toolbar	---	Displays or hides the toolbar.
Status Bar	---	Displays or hides the status bar.
Go to This Day	---	With the month or week view visible and one date selected, this command displays the selected date in day view. The work start time is highlighted. This command is not available in the other views.
Go to Today	---	Displays schedules for the current day or for the work week, week, month, or timeline that contains the current day. In each resulting view, the current day is highlighted. On the timeline view, the current day is the first day in the timeline.
Go to Date	---	Opens a dialog for you to enter a specific date and which calendar view to display. You can choose the date from a pop-up calendar. The view changes to the specified view with the work start time highlighted on the specified date.
Grouping	---	Displays the schedules in multi-resource views in addition to the standard calendar views. The way the grouping displays depends on the selected calendar view. <ul style="list-style-type: none"> • "None": Grouping is off so that only the standard calendar view is visible. • "Date": Grouping is by the dates displayed horizontally with the selected resources underneath displaying either horizontally or vertically. • "Resource": Grouping is by the selected resources displayed horizontally with the dates underneath displaying either horizontally or vertically.
Preferences	---	If more than one Calendar Option is installed, this command sets the default schedule type to open when a day or time slot in the data window is double-clicked. The schedule type can be an "Action" or "Notification".

5.3 Working with Calendar Scheduler

Command	Key combination	Function
Time Scales	---	With the timeline view visible, this command changes the increment of time to display in the timeline. Selecting the same scale again switches between hiding and showing the scale.
Time Scale Captions	---	With the timeline view visible, this command sets the time scale caption to display in the timeline. Selecting the same caption again switches between hiding and showing the caption.
Refresh	F5	Refreshes the data in the Calendar Options Editor.

Tools menu

The Tools menu includes the following commands:

Command	Key combination	Function
Language	---	Displays the "Select Language" dialog so you can change the configuration language of the Calendar Options and WinCC.
Servers	---	Displays the server names when multiple servers are configured. You can choose a server and have the WinCC project connect to a different server.

Help menu

The Help menu includes the following commands:

Command	Key combination	Function
Contents and Index	---	Opens the Calendar Options Information System.
Direct Help	---	Activates the direct help (What's this?).
About Calendar Options	---	Displays the installed version and the installed components of the Calendar Options.

5.3.2.3 Toolbar

The toolbar contains buttons that allow you to quickly activate commands. You can switch between hiding and showing the toolbar by clicking "View > Toolbar". Only the toolbar buttons of the installed Calendar Options are visible.

Selecting the toolbar and dragging it along the borders of the Calendar Options Editor lets you move the toolbar. You can reposition the toolbar by moving it either left and right or up and down.

Icon	Tooltip	Option	Description
	Hide/Show Resources	C E	Switches between showing and hiding the "Resources" window in the Calendar Options Editor.
	Hide/Show Date Navigation	C E	Switches between showing and hiding the "Date Navigation" window in the Calendar Options Editor.
	Action Schedule Editor	C	Opens the Action Schedule Editor with the next default, unconfigured action schedule name displaying.
	Action Editor	C	Opens the Action Editor with the next default, unconfigured action name displaying.
	Calendar List Editor	C E	Opens the Calendar List Editor with the next default calendar name displaying.
	Notification Schedule Editor	E	Opens the Notification Schedule Editor with the next default, unconfigured notification schedule name displaying.
	Contact Editor	E	Opens the Contact Editor with the list of WinCC users and groups displaying so you can create contacts and contact groups.
	Notification Editor	E	Opens the Notification Editor with the next default, unconfigured notification name displaying.
	Calendar Options Help	C E	Opens the Calendar Options Information System.

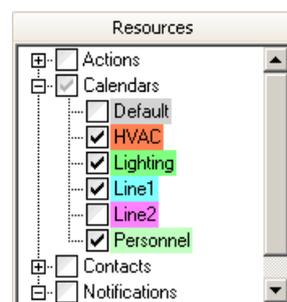
"C": Visible when Calendar Scheduler is installed.

"E": Visible when Event Notifier is installed.

5.3.2.4 "Resources" window

The "Resources" window displays a grouping of the configured resource names and determines which resources to show in the data window. Depending on the installed Calendar Options, a resource can be an action, notification, contact, or calendar.

For quick recognition, the color configured for a resource displays in the "Resources" window. The resources are grouped by resource type.



5.3 Working with Calendar Scheduler

Selecting the check box next to a resource group selects all resources in the group and displays a black check mark. Expanding the group and selecting individual resources changes the check mark color to gray for the group.

All selected resources display in the data window, based on a standard calendar view or a multi-resource view.

5.3.2.5 "Date Navigation" window

The "Date Navigation" window controls the date or date range to display in the data window. The number of consecutive months that display in this window depends on the size of the Calendar Options Editor window. Clicking a day or highlighting a range of days in this window displays the selected day or range of days in the data window. Clicking the left and right arrows next to the month and year allows you to quickly move through the months and years in the calendar.

5.3.2.6 Data window

Data area

The data window displays the date range and the schedules for the resources selected in the "Resources" window. The way the data displays in this window depends on the selected calendar view. A standard calendar view can be a day, work week, week, month, or timeline. Each view displays the schedules in the color configured for the associated calendar. If a schedule is associated with multiple calendars, the color of the schedule displays as the first selected calendar when the schedule was configured.

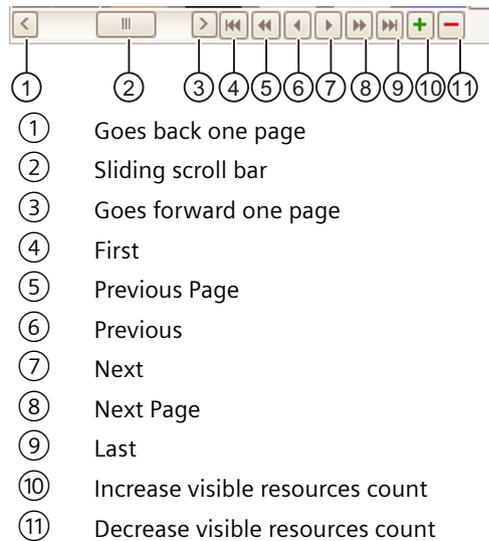
In addition to the standard calendar views, the data window can display multi-resource views. In these views, multiple date areas are displayed vertically or horizontally. The color configured for a selected resource displays as the background color for the resource. Each date area displays the schedules associated with the selected resource. The schedules display as a neutral color to complement the background color. Depending on the installed Calendar Options, a resource can be an action, notification, contact, or calendar.

Double-clicking a day, time slot, or schedule in the data window opens the editor, so you can create a schedule or edit an existing one. You can also highlight a range of days and create a schedule for the duration of the selected days.

Navigating

On the left and right borders of the data window are "Previous" and "Next" tabs. These tabs are available when the selected calendars contain schedules not visible in the current view. Clicking an available tab either advances the view to display the next schedule or goes backwards to the previous schedule.

When multi-resource view is selected, a navigation toolbar displays for working with schedules. The toolbar provides navigating, scrolling, and increasing/decreasing the number of visible resources.



5.3.2.7 Status bar

The status bar displays the current user logged in to use the Calendar Options Editor and indicates whether the server is running or not running. The status bar also displays the server name and computer name where the WinCC project is connected.

5.3.2.8 "Agenda" list

Introduction

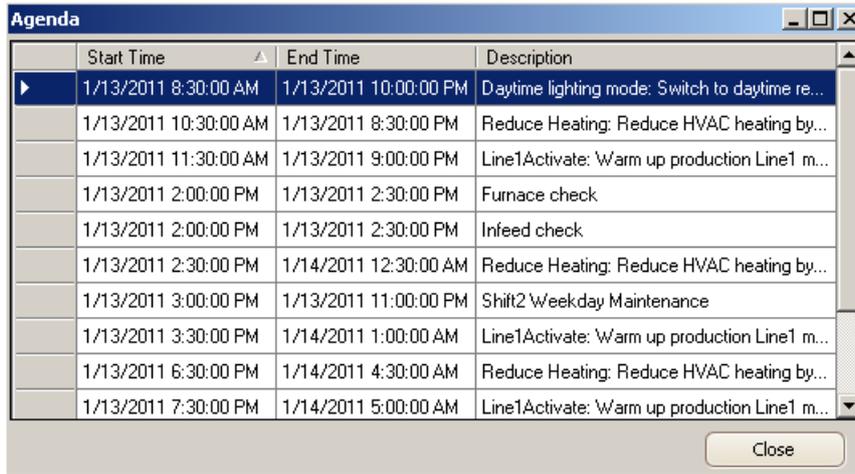
The "Agenda" list is opened from the data window in the Calendar Options Editor.

When a date or time slot contains more schedules than what displays in the calendar view, an arrow displays on the date or time slot. Clicking the arrow opens the "Agenda" list to display the additional schedules that are not visible on that date or time slot.

Usage

In the "Agenda" list, you can:

- Double-click a schedule to display its configuration in the editor.
- Click a column heading to sort the schedules in ascending or descending order by start time, end time, or description.



	Start Time	End Time	Description
▶	1/13/2011 8:30:00 AM	1/13/2011 10:00:00 PM	Daytime lighting mode: Switch to daytime re...
	1/13/2011 10:30:00 AM	1/13/2011 8:30:00 PM	Reduce Heating: Reduce HVAC heating by...
	1/13/2011 11:30:00 AM	1/13/2011 9:00:00 PM	Line1Activate: Warm up production Line1 m...
	1/13/2011 2:00:00 PM	1/13/2011 2:30:00 PM	Furnace check
	1/13/2011 2:00:00 PM	1/13/2011 2:30:00 PM	Infeed check
	1/13/2011 2:30:00 PM	1/14/2011 12:30:00 AM	Reduce Heating: Reduce HVAC heating by...
	1/13/2011 3:00:00 PM	1/13/2011 11:00:00 PM	Shift2 Weekday Maintenance
	1/13/2011 3:30:00 PM	1/14/2011 1:00:00 AM	Line1Activate: Warm up production Line1 m...
	1/13/2011 6:30:00 PM	1/14/2011 4:30:00 AM	Reduce Heating: Reduce HVAC heating by...
	1/13/2011 7:30:00 PM	1/14/2011 5:00:00 AM	Line1Activate: Warm up production Line1 m...

5.3.3 Opening the Action Schedule Editor

Introduction

The Action Schedule Editor is used to create, rename, modify, and delete action schedules. This editor lets you set the start and end time for selected actions to execute.

Procedure

You can open the Action Schedule Editor in the following ways:

- From the toolbar, click .
- From the menu bar, select "Edit > Action Schedules".

- In the data window:
 - Double-click a date or time slot.
 - Right-click a date or time slot and choose "New Action Schedule".
 - Double-click an action schedule.
 - Right-click an action schedule and choose "Open". For all occurrences in a recurring schedule, right-click and choose "Edit Series".

Note

If other schedule types are available, the action schedule preference must be selected as the default schedule type for this editor to open when double-clicking a date or time slot. To set the preference, click "View > Preferences > Default Schedule Type > Action".

- From the "Agenda" list, double-click an action schedule.

Results

When the Action Schedule Editor is opened from the toolbar or menu bar, a default unconfigured action schedule displays. Opening a configured action schedule displays its configuration.

Action Schedule

Name: Line1Activate New Delete

Description: Warm up production Line1 machines before workers arrive and shut down after they leave.

Start Time: 1/13/2011 9:00:00 AM

End Time: 1/13/2011 5:00:00 PM

Start Actions		End Actions	
Name	Recurrence	Name	Recurrence
Plant1\Machine2\Machine2Start	►*	Plant1\Machine2\Machine2Stop	►*

Execute on startup Execute on change

Calendar: Line1

OK Apply Recurrence Help Cancel

5.3.4 Opening the Action Editor

Introduction

The Action Editor is used to create, rename, modify, or delete tag and script actions to execute in an action schedule.

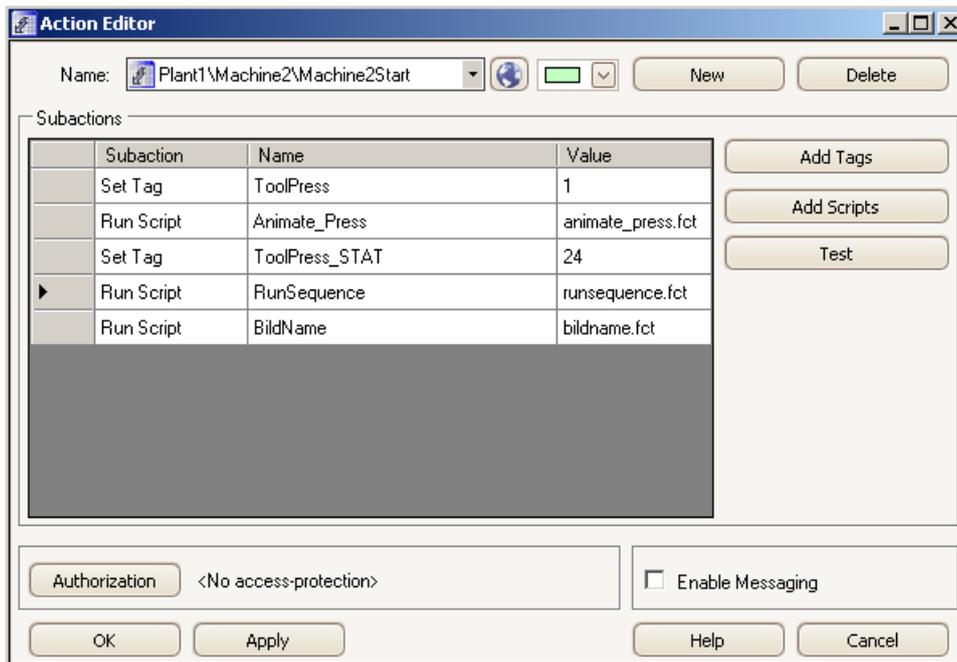
Procedure

You can open the Action Editor in the following ways:

- From the toolbar, click .
- From the menu bar, select "Edit > Actions".
- Click the "Add New" button in the Action Schedule Editor.
- Right-click in an actions area in the Action Schedule Editor and choose "New".

Results

When the Action Editor is opened, a default unconfigured action displays. Selecting an action displays its configuration.



5.3.5 Opening the Calendar List Editor

Introduction

The Calendar List Editor is used to create, rename, and delete calendars. This editor lets you choose a color to identify a calendar and its associated schedules. Depending on the installed Calendar Options, a schedule can be an action schedule or notification schedule.

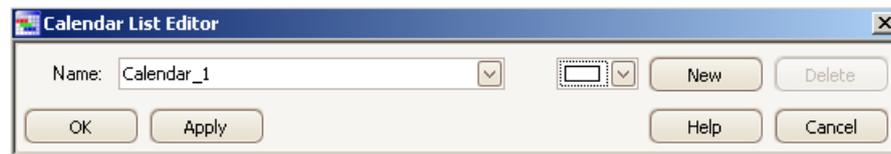
Procedure

You can open the Calendar List Editor in the following ways:

- From the toolbar, click .
- From the menu bar, select "Edit > Calendars".

Results

The Calendar List Editor opens with a default calendar and color displaying.



5.3.6 Changing the configuration language

Introduction

You can change the configuration language in which a calendar displays by selecting a language from a list. The languages available for Calendar Options are those installed with WinCC except ASIAN languages.

Procedure

1. In the Calendar Options Editor, click "Tools > Language".
2. Select the language from the list and click "OK".
The Calendar Options Editor and WinCC configuration language change to the selected language.

5.3.7 Field descriptions

5.3.7.1 Calendar List Editor

In the Calendar List Editor, you create, rename, and delete calendars. You can specify a color to quickly identify a calendar and its associated schedules. Depending on the installed Calendar Options, a schedule can be an action schedule or notification schedule.

Field	Description
Name	A unique, descriptive name for the calendar that represents a grouping of schedules. Selecting the arrow next to this field displays a list of calendar names created in the opened WinCC project. You create a calendar by clicking "New", entering a unique name in this field, and clicking "OK".
Locale button	Opens the Locale Editor so you can specify translated text to represent the calendar name. Calendars not configured with translated text will display in the language configured for the Calendar Option. This button displays only for configured calendars. Clicking "Apply" while creating a calendar saves the name and displays this button.
Color picker	Opens the color palette so you can select a color to associate with a calendar name and its schedules.
New	Clears the visible configuration in the editor and displays a default calendar name.
Delete	Deletes the selected calendar name and its associated schedules permanently. You must confirm a calendar deletion.
OK	Saves the configuration and closes the editor.
Apply	Saves the configuration and keeps the editor open.
Cancel	Exits the editor without saving any modifications.

5.3.7.2 Action Schedule Editor

In the Action Schedule Editor, you define the general properties for an action schedule.

Field	Description
Name	A descriptive name for the schedule. When this editor is opened initially, a default name displays. Although you can keep the default name, it is recommended that you rename the schedule for easy recognition.
Description	Information that describes the schedule.
Start Time	The date and time you want the schedule's start actions to execute. You can enter the date and time or use the arrows. Clicking the date arrow opens a pop-up calendar so you can choose the date.
End Time	The date and time you want the schedule's end actions to execute. You can enter the date and time or use the arrows. Clicking the date arrow opens a pop-up calendar so you can choose the date.
Start Actions	A list of actions to perform at the specified start time for the associated schedule. An action schedule references one or more actions.

Field	Description
End Actions	A list of actions to perform at the specified end time for the associated schedule. An end action is not required.
Select	Opens the "Actions" list that contains configured actions so you can quickly choose the actions to execute in the schedule. You can select the check box next to an action group to select all actions in a group. A black check mark displays in the check box. Expanding an action group and selecting individual actions displays a black check mark for the action and a gray check mark for the action group.
Add New	Opens the Action Editor so you can configure a new action to attach to the schedule. After the action is created, it displays in the respective "Start Actions" or "End Actions" area of the Action Schedule Editor. The action is also added to the "Actions" list and the "Resources" window. This button is not visible in Runtime.
Execute on startup	Enables the execution of actions if the following conditions occur: <ul style="list-style-type: none"> Executes start actions if the schedule becomes active at startup.
Execute on change	Enables the execution of actions if the following conditions occur: <ul style="list-style-type: none"> Executes start actions if the schedule becomes active due to a date/time change. Executes end actions if the schedule becomes inactive due to a date/time change.
Calendar	Selects the calendars where the schedule is to display. Clicking the arrow lets you choose one or more configured calendars.
Locale button	Opens the Locale Editor so you can specify translated text to represent the schedule name. Names not configured with translated text will display in the language configured for the Calendar Option. This button displays only for configured schedules. Clicking "Apply" while creating a schedule saves the name and displays this button. This button is not visible in Runtime.
Recurrence	Opens the "Recurrence" dialog so you can set the frequency and time period to repeat the schedule.
New	Clears the visible configuration in the editor and displays the next available default schedule name.
Delete	Deletes the schedule from the selected calendar. If recurrence is configured, you can delete the schedule on a specific date and time, without deleting the series.
OK	Saves the configuration and closes the editor.
Apply	Saves the configuration and keeps the editor open.
Cancel	Exits the editor without saving any modifications.

5.3.7.3 "Recurrence" dialog

In the "Recurrence" dialog, you configure a schedule to repeat many times, so you will not need to create the schedule again and again. Depending on the installed Calendar Options, a schedule can be an action schedule or notification schedule.

Field	Description
Recurrence time	The time period that the schedule is to start and end. When you select the start and end times, the duration is calculated automatically. If you change the duration, the end time changes to reflect the selected duration.
Recurrence pattern	Defines the frequency that the schedule is to repeat. The options change based on the selected frequency: <ul style="list-style-type: none"> • "Minutely" • "Hourly" • "Daily" • "Weekly" • "Monthly" • "Yearly" Example: To set a schedule to repeat every Friday, you would select "Weekly" and "Friday" and set "Recur every" to "1".
Range of recurrence	Defines the date range that the recurrence pattern is to start and end. The end date has the following options: <ul style="list-style-type: none"> • "No end date" • "End after": Specifies the number of occurrences. After you enter the number of occurrences, the "End by" date changes so you can see the end date of the range. • "End by": Specifies a date. After you select a date from the pop-up calendar, the schedule's end time is added automatically.
Remove Recurrence	Deletes the recurrence configuration from the schedule. All occurrences of the schedule except the initial configured instance are removed.
OK	Saves the configuration and closes the dialog.
Cancel	Exits the dialog without saving any modifications.

5.3.7.4 Action Editor

In the Action Editor, you define the general properties for an action.

Field	Description
Name	A unique, descriptive name to identify an action that can be associated with an action schedule. When this editor is opened initially, a default name displays. Although you can keep the default name, it is recommended that you rename the action for easy recognition. You can save the action in a group by entering the group name and action name in a path structure. Use the backslash "\" as a separator to form the groups. Example: "Plant1\Machine2\Machine2Start"
Locale button	Opens the Locale Editor so you can specify translated text to represent the action name. Names not configured with translated text will display in the language configured for the Calendar Option. This button displays only for configured schedules. Clicking "Apply" while creating a schedule saves the name and displays this button.
Color picker	Opens the color palette so you can select a color to identify this action.
Subactions	A list of tag and script actions grouped together to form one action. A subaction can be a tag action that sets a specific value or a script action that executes C-scripts. An action must have at least one configured subaction.
Add Tags	Creates a subaction by opening the "Tag Selection" dialog so you can choose the desired tags to execute. The selected tags are appended to the list of subactions.
Add Scripts	Creates a subaction by opening a list of scripts so you can choose the desired C-scripts to execute. The selected scripts are appended to the list of subactions.
Test	Executes the subactions in the selected action.
Authorization	Opens a list of authorizations so you can set a user restriction on the use of the action. The selected authorization displays next to the "Authorization" button. The default authorization is "<No access-protection>".
Enable Messaging	Enables the logging of messages to the WinCC messaging system anytime this action is executed.
New	Clears the visible configuration in the editor and displays the next available default action name.
Delete	Deletes the selected action. If the action is used in a schedule, a message displays stating you cannot delete the action.
OK	Saves the configuration and closes the editor.
Apply	Saves the configuration and keeps the editor open.
Cancel	Exits the editor without saving any modifications.

5.4 Configuration

5.3.7.5 Locale Editor

In the Locale Editor, you specify text to represent the translated name for a schedule or resource. Depending on the installed Calendar Options, a schedule can be an action schedule or notification schedule. A resource can be an action, notification, contact group, or calendar.

Field	Description
Language	Displays a list of languages installed in WinCC.
Name	The translated text to represent the selected schedule or resource name for a particular language. The translated names will display in Runtime. Names not configured with translated text will display in the language configured for the Calendar Option.
OK	Saves the configuration and closes the editor.
Cancel	Exits the editor without saving any modifications.

5.4 Configuration

5.4.1 Configuring action schedules

5.4.1.1 Creating a calendar

Introduction

You create calendars to allow subsets of schedules to display in Runtime. The Calendar Options contain a default calendar. The Calendar List Editor lets you create additional calendars and manage the list of calendars.

When creating a calendar, you choose a color for easy identification of the calendar and its schedules.

Procedure

1. Select "Edit > Calendars" to open the Calendar List Editor.
2. Click "New".
3. Replace the default name with a unique name for the calendar.
4. Click the color picker arrow and select a color to associate with this calendar and its schedules.
5. To specify translated text (Page 82), click "Apply" and then click the "Locale" button. Enter the translated text for the calendar name in each language and click "OK".
6. Click "OK".
The calendar is added and sorted alphabetically in the "Resources" window. The calendar can be selected in the schedule editor.

5.4.1.2 Creating an action schedule

Introduction

You create action schedules to set the time to execute actions. You create the schedules using the Action Schedule Editor by selecting actions from a preconfigured list or by configuring new actions.

Procedure

1. Double-click a date or time slot in the data window to open the Action Schedule Editor.

Note

If other schedule types are available, the action schedule preference must be selected as the default schedule type for this editor to open when double-clicking a date or time slot. To set the preference, click "View > Preferences > Default Schedule Type > Action".

2. In the "Name" field, enter a name for the action schedule.
3. Optionally, enter information to describe the schedule in the "Description" field.
4. Under "Start Time", set the time you want the schedule to start on the selected date.
5. Under "Start Actions", choose the actions you want to execute at the selected start time:
 - To choose from a list of preconfigured actions, click "Select". Select the actions (Page 84) and click "OK".
 - To configure a new action, click "Add New". The Action Editor opens for you to configure a new action (Page 77) to attach to this schedule.
6. Under "End Time", set the date and time you want the schedule to stop.
7. Under "End Actions", use "Select" or "Add New" to choose the actions to execute at the selected end time.

Note

An end action is not required.

8. To change the execution order of the actions, click a row to highlight it. Drag the action to the desired location. A red line appears at the point where the action will move.

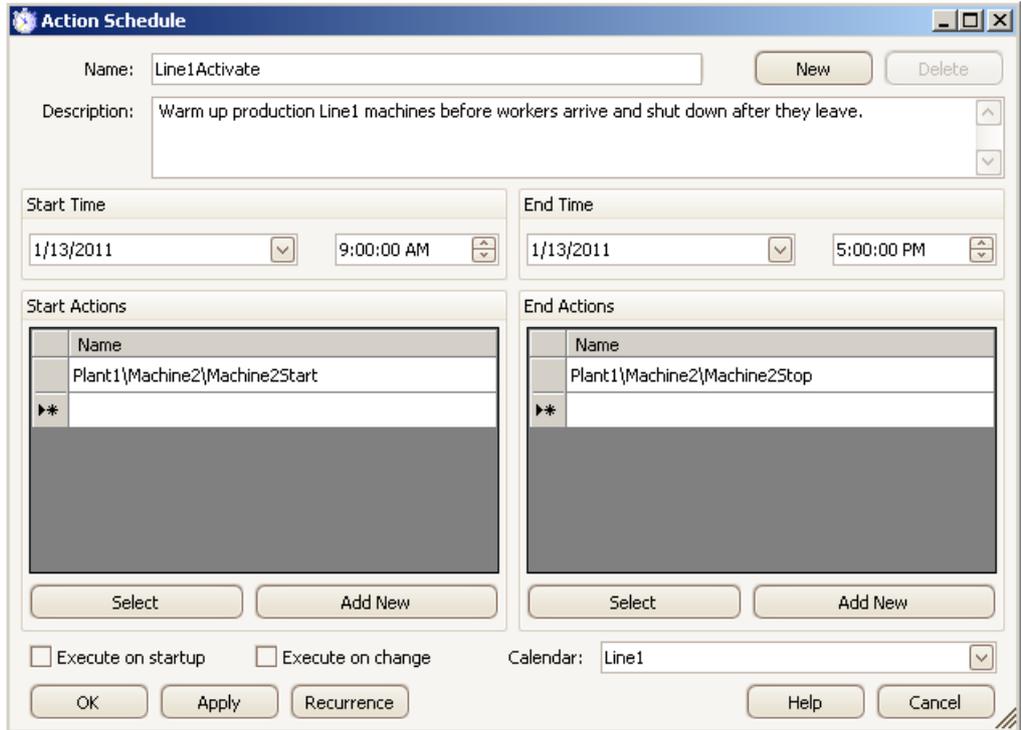
5.4 Configuration

9. Click the "Calendar" arrow and select the calendars where the schedule is to display. Click outside the list.

Note

Clicking  closes the list without saving the selections made.

If you do not select a calendar, the schedule is associated with the "Default" calendar.



10. Choose whether to execute the schedule due to a startup/shutdown or a date/time change:
 - Select "Execute on startup" to enable the execution of start actions if the schedule becomes active at startup.
 - Select "Execute on change" to enable the execution of start actions if the schedule becomes active due to a date/time change or the execution of end actions if the schedule becomes inactive due to a date/time change.
11. To configure the schedule to repeat, click "Recurrence". Set the desired recurrence pattern and time (Page 80) and click "OK".
12. To specify translated text (Page 82), click "Apply" and then click the "Locale" button. Enter the translated text for the schedule name in each language and click "OK".
13. After you finish configuring the action schedule, click "OK".

Results

The action schedule displays in the selected calendars at the specified times. The color of a schedule is the same as its associated calendar. The way the schedule color (Page 103) displays depends on the selection of multiple calendars in the "Resources" window and a multi-resource view.

An arrow displays in the date or time slot when it contains schedules that are not visible. Clicking the arrow displays the additional schedules in the "Agenda" list.

5.4.1.3 Creating an action

Introduction

The Calendar Scheduler Server executes the actions associated with an action schedule at the specified time. You create actions and subactions to associate with schedules using the Action Editor during configuration. You must configure at least one subaction for each action. A subaction can be a tag action that sets a specific value or a script action that executes C-scripts.

If the project will contain several actions, you can create action groups to achieve a structured sorting of the actions. An action group is created when you enter a name for an action.

To prevent unauthorized use of an action in Runtime, you can set a user authorization on the action. After an action is configured, it appears in the "Actions" list so that you can use the action again for creating schedules quickly.

Procedure

1. Select "Edit > Actions" to open the Action Editor.

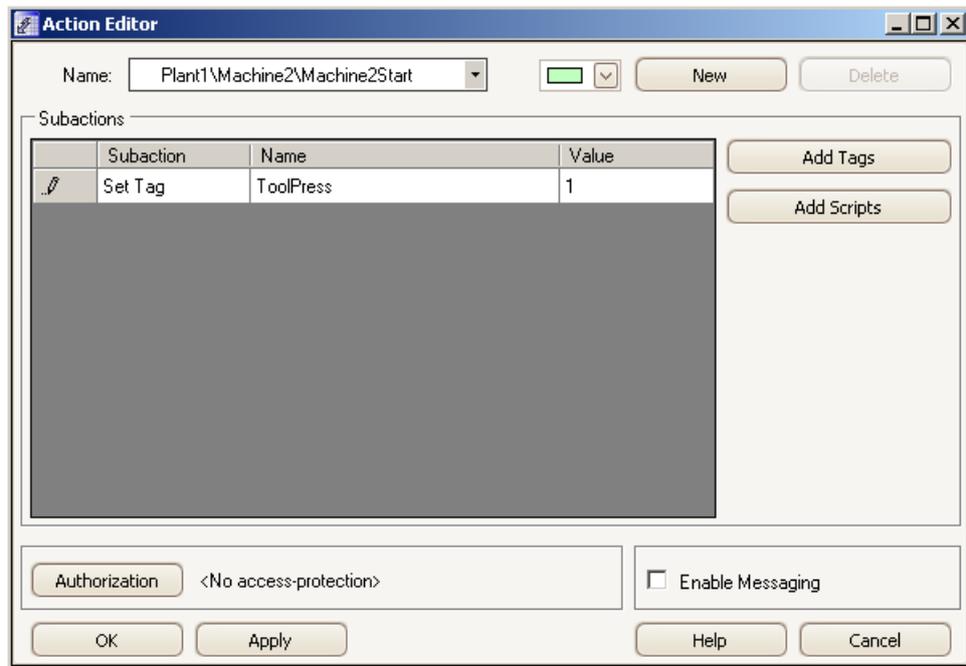
Note

While creating or modifying a schedule, you can click "Add New" to open the Action Editor and configure a new action to attach to the schedule.

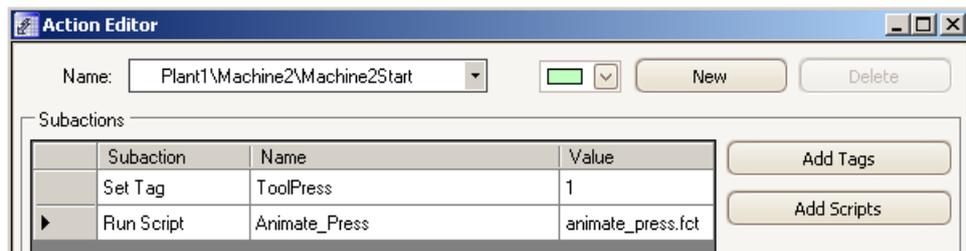
2. In the "Name" field, replace the default name with a descriptive name for this action. If you want to create the action in a group, enter the group name and action name in a path structure (Page 79). Use the backslash "\" as a separator to form the groups, for example: "Plant1\Machine2\Machine2Start". Although you can keep the default name, it is recommended that you rename the action for easy recognition.
3. Click the color picker arrow and select a color to associate with this action.

5.4 Configuration

4. Configure tag subactions to associate with this action:
 - Click "Add Tags".
 - In the "Tag Selection" dialog, select the tags to attach to the action and click "OK". The tags are added as subactions in the Action Editor. Information about tags is in the WinCC Information System under "Working with Tags".
 - In the Action Editor, click in the "Value" field for each subaction, and enter the value that the action is to set.



5. Choose the C-script subactions to associate with this action if desired:
 - Click "Add Scripts".
 - In the "Scripts" list, select the scripts to attach to the action and click "OK". The scripts are added as subactions in the Action Editor. Information about scripting is in the WinCC Information System under "Working with WinCC > ANSI-C for Creating Functions and Actions".

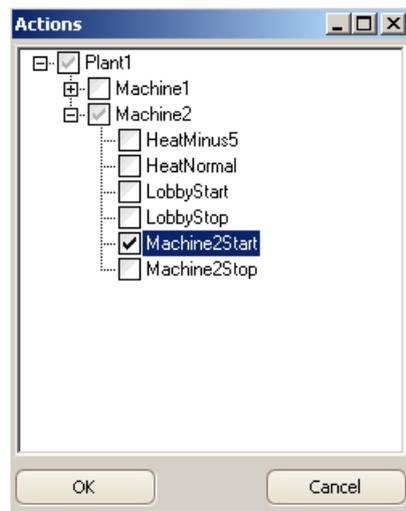


6. To change the execution order of the subactions, click a subaction's row to highlight it. Drag the subaction to the desired location. A red line appears at the point where the subaction will move.
7. To permit only authorized users to create schedules using this action, click "Authorization". Choose an authorization that was defined in the User Administrator and click "OK".

8. To log messages (Page 85) to the WinCC messaging system anytime this action is executed, select the "Enable Messaging" check box.
9. To specify translated text (Page 82) , click "Apply" and then click the "Locale" button. Enter the translated text for the action name in each language and click "OK".
10. Save the configuration.

Results

The new action is added to the "Actions" list for use in configuring schedules. The notification is also added and sorted alphabetically in the "Resources" window.



If the action was created while configuring a schedule, the action is added to the start or end actions area in the Action Schedule Editor.

5.4.1.4 Creating action groups

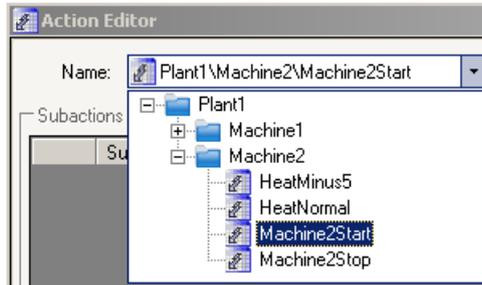
Introduction

Action groups allow you to achieve a structured sorting of the actions. You create an action group when you enter an action name in the Action Editor.

You can move a non-grouped action to a group or move a grouped action to a different path. Actions can have the same name in different groups.

Entering action group names

- Non-grouped actions:
Enter the name in the "group name\action name" path structure. Use the backslash "\" as a separator to form the groups.
Example: Move the action named "Machine2Start" to "Plant1\Machine2\Machine2Start".



- Grouped actions:
Select the action and enter the path where you want to move the action.

Selecting actions and action groups

In the Action Editor,  represents an action group and  represents an action.

- Selecting a grouped action and clicking "New" lets you create an action in the same group.
- Selecting an action group and clicking "New" lets you create an action in this group.

An action group displays in the "Resources" window and the "Actions" list according to the specified path structure.

Selecting an action group from the "Actions" list when creating a schedule adds all actions in the group to the schedule.

5.4.1.5 Configuring a recurring schedule

Introduction

A recurring schedule is one schedule configured to repeat multiple times. Rather than adding the same schedule to a calendar several times, you can configure one recurring schedule that appears in the calendar at the specified dates and times.

Procedure

1. Create a new schedule or double-click a schedule to display its configuration.
2. In the editor, click "Recurrence" to open the "Recurrence" dialog.

3. Under "Recurrence time", set the time the schedule is to start and end.
This step is not necessary if you are adding a recurrence to a schedule where the time remains the same.
4. Under "Recurrence pattern", choose the frequency the schedule is to repeat.
You can set the schedule to repeat by the minute, hour, day, week, month, or year. Different options display based on the frequency you choose.
Example: To set a schedule to repeat every Friday, you would select "Weekly" and "Friday" and set "Recur every" to "1".

5.4 Configuration

5. Under "Range of recurrence", select when you want the recurrence pattern to start and end:
 - The recurrence has no end.
 - The recurrence is to end after a specified number of occurrences.
 - The recurrence is to end at a specified date.
6. After you finish configuring the recurrence, click "OK".
The schedule displays in the calendar at the times specified in the recurrence pattern. In Runtime, the recurrence symbol  displays to identify the schedule as recurring.

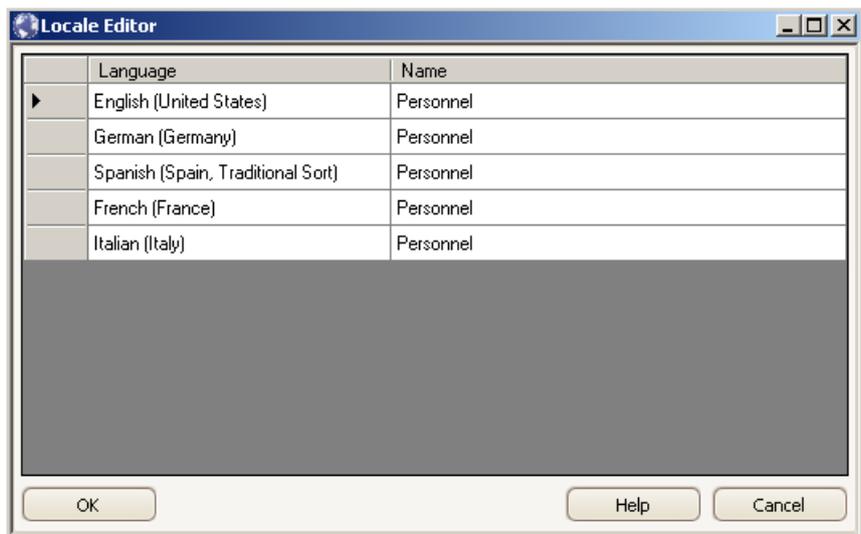
5.4.1.6 Adding translated text

Introduction

You can specify text to represent the translated names of schedules and resources to display in Runtime. Names not configured with translated text will display in the language configured for the Calendar Option. Depending on the installed Calendar Options, a schedule can be an action schedule or notification schedule. A resource can be an action, notification, contact group, or calendar.

Procedure

1. Open the appropriate editor and display the configuration for a schedule or resource.
2. Click the "Locale" button  to open the Locale Editor.
The languages configured with the WinCC project display. You can make more languages available by opening the "Text Library" editor and selecting "Language > Add/Remove". Information about the text library is in the WinCC Information System under "Setting Up Multilingual Projects".



- For each displayed language, click in the "Name" field and enter the translated text to display for the name.

	Language	Name
▶	English (United States)	Personnel
	German (Germany)	Personal
	Spanish (Spain, Traditional Sort)	Personal
	French (France)	Personnel
	Italian (Italy)	Personale

- Click "OK".
- Save the configuration.

5.4.1.7 Setting user authorizations

Introduction

The management of the user rights for the Calendar Options takes place in the WinCC User Administrator. Users are assigned various authorizations in it for operating and monitoring purposes.

The tasks of the WinCC User Administrator include:

- Creation and editing of users and user groups.
- Assignment and administration of access rights known as authorizations.

After users are configured in the User Administrator, you will need to assign authorizations to them. You can create authorizations for frequently used calendar scheduling functions.

Configuring user administration

- If desired, create authorizations for frequently used calendar scheduling functions in the User Administrator.
Example authorizations are "Production Line 1 Manager" and "Calendar Editing". Information about user administration is in the WinCC Information System under "Working with WinCC > Structure of the User Administration".
- Create groups and users and assign the appropriate authorizations.

Setting authorizations on resources

You can set an authorization on a resource to permit only authorized operators to create schedules using this resource. When operators attempt to select a resource they are not authorized to use, they receive the "Insufficient permission" message. When operators attempt to modify a schedule that contains at least one unauthorized resource, the schedule remains at its preconfigured date and time.

5.4 Configuration

Depending on the installed Calendar Options, a resource can be an action, notification, or contact.

Note

Operators can select a resource that is not assigned an authorization. To prevent unauthorized operators from creating or modifying any schedules, set an authorization on all resources.

1. In the editor, select the name of the resource to display its configuration.
2. Click "Authorization".
3. Choose an authorization that was defined in the User Administrator and click "OK".
4. Save the configuration.

5.4.1.8 Selecting multiple actions, scripts, and tags

Introduction

In some editors, dialogs, and lists, you can select a range or multiple actions, subactions, tags, or scripts.

Information about tags is in the WinCC Information System under "Working with Tags".
Information about scripting is in the WinCC Information System under "Working with WinCC > ANSI-C for Creating Functions and Actions".

Action Schedule Editor and Action Editor

To select a range of actions:

Click a row to highlight it. Press <Shift> while clicking another row. All actions between the two rows that you clicked are selected.

To select multiple actions:

Click a row to highlight it. Press <Ctrl> while clicking additional rows. All actions that you clicked are selected.

Note

In the Action Schedule Editor, the actions associated with the schedule display under "Start Actions" and "End Actions". In the Action Editor, the group of tag and C-script actions that form the action display under "Subactions".

"Tag Selection" dialog

To select a range of tags:

Click a tag to highlight it. Press <Shift> while clicking another tag. All tags between the two tags that you clicked are selected.

To select multiple tags:

Click a tag to highlight it. Press <Ctrl> while clicking additional tags. All tags that you clicked are selected.

"Actions" list

To select all actions in a group:

Select the check box next to an action group. A black check mark displays in the check box. Expand the action group to see all actions selected.

To select individual actions:

Expand an action group and select the desired actions. A black check mark displays next to the selected actions. The check mark for the group appears gray.

"Scripts" list

To select a range of scripts, use these ways:

- Drag over the scripts you want selected.
- Click a script to highlight it. Press <Shift> while clicking another script. All scripts between the two scripts that you clicked are selected.

To select multiple scripts:

Click a script to highlight it. Press <Ctrl> while clicking additional scripts. All scripts that you clicked are selected.

5.4.1.9 Logging schedule messages

Introduction

The Calendar Scheduler supports the logging of schedule messages in the WinCC message system. Logging occurs only for the schedules that reference an action configured with the "Enable Messaging" capability. The Calendar Scheduler Server generates a message each time the action schedule is executed during Runtime.

The WinCC message system records the messages from the Calendar Scheduler Server and writes them in chronological order to the message log. The messages can be viewed in various message lists in the message window. The message lists contain a selection of all messages in the log. The schedule messages display in the color configured for a calendar.

Single message configuration

The Calendar Scheduler automatically creates a single message in WinCC Alarm Logging. The single message contains the following parameters that you can set:

Class:	System, without acknowledgment
Type:	Process control system
Message text:	CALSCH:@103%s@

5.4 Configuration

Info Text:	Calendar Scheduler
This message:	will be archived

Detailed information about messaging is in the WinCC Information System under "Setting Up a Messaging System > Configuring the Message System > Working with Single Messages".

5.4.2 Modifying action schedules

5.4.2.1 Adding actions and subactions

Introduction

An action can contain tag actions and C-script actions. You can add tag and script actions as subactions to an action. You can also change the execution order. Any modifications to an action take effect immediately to all schedules that reference the modified action.

Adding actions to a schedule

1. Double-click an action schedule to display its configuration in the editor.
If the schedule is configured with a recurrence, right-click the schedule and choose "Edit Series". For information, see editing the recurrence series (Page 91).
2. Click "Select". In the list, select the preconfigured actions to associate with this schedule and click "OK".

Note

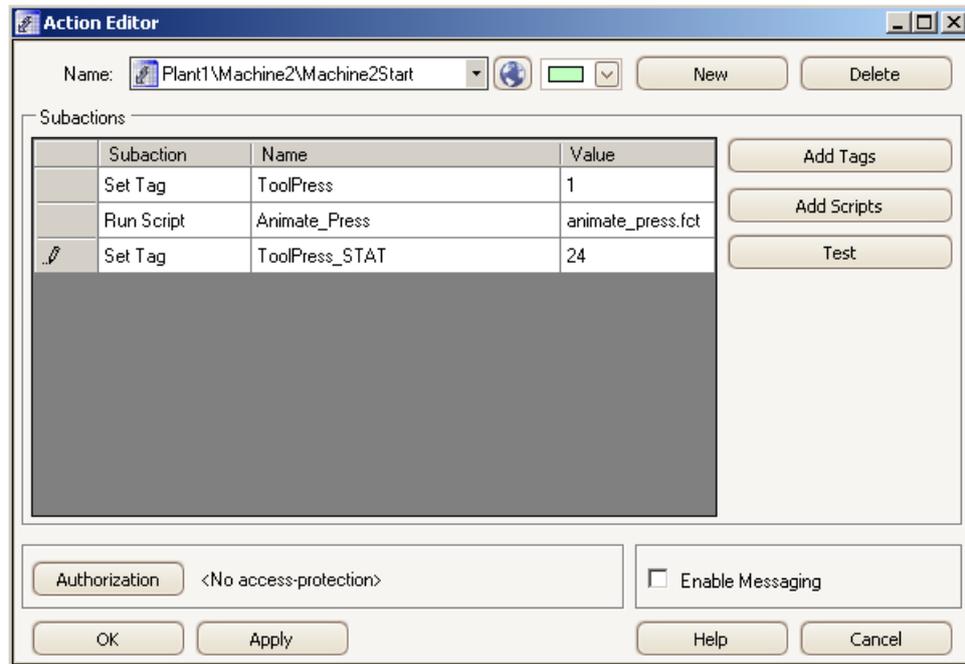
You can configure a new action to attach to this schedule by clicking the "Add New" button.

3. Save the configuration.

Adding tag subactions

1. In the Action Editor, select an action to display its configuration.
2. Click "Add Tags". In the "Tag Selection" dialog, select the tags to attach to the action and click "OK".
The tags are added as subactions.

- Click in the "Value" field for each subaction added and enter the tag value.

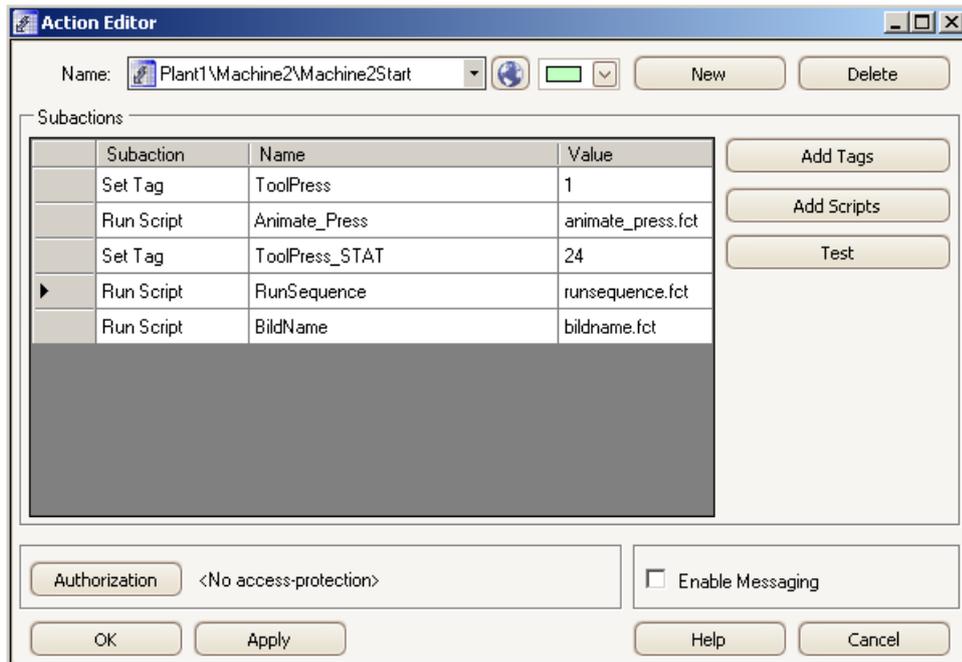


- Save the configuration.

Adding script subactions

1. In the Action Editor, select an action to display its configuration.
2. Click "Add Scripts". In the "Scripts" list, select the C-scripts to attach to the action and click "OK".

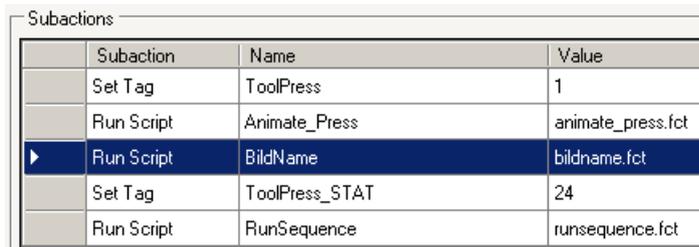
The scripts are added as subactions.



3. Save the configuration.

Changing execution order

1. Click an action's or subaction's row to highlight it.
2. Drag the action or subaction to the desired location. A red line appears at the point where the action or subaction will move.



5.4.2.2 Renaming schedules and resources

Introduction

You can rename schedules and resources. You can quickly rename a schedule from a calendar view in the data window. The editors let you rename and make additional changes to the schedules and resources.

Depending on the installed Calendar Options, a schedule can be an action schedule or notification schedule. A resource can be an action, notification, or calendar.

Note

You cannot rename the "Default" calendar.

Renaming a resource

1. In the appropriate editor, select the resource you want to rename.
2. Enter a new name.
3. If the previous resource name contained translated text, click the "Locale" button. Change the entries to reflect the new translated names and click "OK".
4. Save the configuration.
The new name appears in the list of preconfigured resources, the "Resources" window, and the schedules that reference it.

Renaming a schedule

From calendar view in the data window

1. Click the schedule to highlight it and then click again.
2. Enter a new name.
If this schedule is in a recurrence series, the name changes only for the selected date. The name and time of other occurrences in the series do not change.

From the editor

1. Double-click the schedule. Optionally, right-click the schedule and choose "Open".
2. In the editor, enter a name and click "OK".
If this schedule is in a recurrence series, the name changes only for the selected date. The name of other occurrences in the series does not change.

Renaming a recurring schedule

1. Right-click a schedule configured with a recurrence and choose "Edit Series".
2. In the editor, enter a name and click "OK".
The name changes for all occurrences of the schedule.

5.4.2.3 Changing schedule dates

Introduction

Schedules are labeled in the calendars according to the start and end time. You can quickly change a schedule by dragging it to the desired date and time in a calendar view. You can also drag the schedule to a date in the "Date Navigation" window. The day and work week views allow you to quickly change the duration of a schedule. The editor lets you change the date and time and make additional changes.

Dragging and dropping schedules

In the displayed calendar view

Day:	Drag the schedule to the desired time slot on the same day. The schedule moves to the selected time. The configured duration remains the same. Depending on the selected time, the schedule may extend into another day.
Work Week:	<ul style="list-style-type: none">• Drag the schedule to the desired time slot on the same day. The schedule moves to the selected time.• Drag the schedule to another displayed day and time slot. The schedule moves to the selected day and time slot. The configured duration remains the same. Depending on the selected time, the schedule may extend into another day.
Week, Month, or Timeline:	Drag the schedule to another day in the displayed view. The schedule moves to the selected date. The configured time and duration remain the same.

To the "Date Navigation" window

From any calendar view, drag the schedule to a date in the "Date Navigation" window. The schedule moves to the selected date. The configured time and duration remain the same.

Changing the duration

1. Select a schedule in the day or week view.
2. Move the mouse arrow over the start or end border until the arrow changes to a vertical arrow.
3. Drag the border to the desired time and then release.

Changing dates in the editor

1. Display the configuration for a schedule or recurring schedule in the editor.
2. Under "Start Time" and "End Time", set the time the schedule is to start and end.
3. Click "OK".
The schedule moves in the selected calendars to the modified date and time.

5.4.2.4 Changing a schedule and resource color

Introduction

You can change the color defined for a schedule or resource. You can also delete a schedule from a calendar and add it to another calendar. The way the schedule or resource color (Page 103) displays depends on the selections in the "Resources" window and the selected calendar view and multi-resource view. Depending on the installed Calendar Options, a schedule can be an action schedule or notification schedule. A resource can be an action, notification, contact, contact group, or calendar.

Changing a resource color

1. In the appropriate editor, select the resource name whose color you want to change.
2. Click the color picker arrow and choose a color.
3. Click "OK".

The color changes everywhere the selected resource name is used. If a calendar color is changed, the color changes for all schedules in that calendar.

Changing a schedule to a different calendar

1. Display the configuration for a schedule or recurring schedule in the editor.

Note

For a recurring schedule, you must edit the series. You cannot set an occurrence of the schedule in different calendars.

2. Click the "Calendar" arrow and choose the calendars:
 - Click a previously selected calendar to remove the schedule from that calendar.
 - Select the calendars where the schedule is to display. Click outside the list.

Note

Clicking  closes the list without saving the selections made.

3. Save the configuration.

The schedule displays in the selected calendars. The schedule color changes to match the color of each associated calendar.

5.4.2.5 Modifying or restoring a recurring schedule

Introduction

Modifying occurrences in a recurring schedule provides time-saving ways of working with schedules. You can override a schedule for a particular day, without changing the initial configured time of the recurring schedule. For example, you might want the schedule to start and end at a different time on one day.

5.4 Configuration

You can make changes to all occurrences in the recurring schedule or change an occurrence for a specific day. In case you want to revert a recurring schedule to its initial configuration, you can remove all overrides.

Editing the recurrence series

1. Right-click a schedule configured with a recurrence and choose "Edit Series".
2. Make the desired changes.
3. Click "Recurrence" to edit the recurrence pattern and time (Page 72) in the "Recurrence" dialog. Click "OK".
4. When the confirmation message to remove the exceptions associated with this recurring schedule displays, click "Yes".
Any overrides made previously to this recurring schedule will be removed.
5. Click "OK" to save the configuration.
The modifications take effect immediately for all occurrences of the schedule.

Note

Modifying an instance of a recurring schedule

The "Recurrence" button is disabled if the user opens a single instance of a recurring schedule as the modification applies only to that instance.

Overriding a recurrence series

1. Double-click the schedule on the date you want to change. Optionally, right-click the schedule and choose "Open".
2. Make the desired changes.
3. Click "OK".
The modifications take effect immediately only for the selected date and do not change the other occurrences in the series.

Note

You can quickly override a date and time by dragging the schedule to the desired date.

Restoring a recurring schedule

Restoring one override

Right-click an occurrence of the schedule that contains an override and choose "Restore Default State". Only this occurrence of the schedule changes to the initial configured state of the recurring schedule.

Restoring all overrides

1. Right-click any occurrence in the recurring schedule and choose "Edit Series".
2. In the editor, click "Recurrence".

3. In the "Recurrence" dialog, click "OK" without making any changes.
4. Click "Yes" when the confirmation message displays. Click "OK" to close the editor. All modified and deleted occurrences are returned to the initial configured state of the recurring schedule. All occurrences of this schedule now have the same settings.

Removing a recurrence

1. Right-click any occurrence in the recurring schedule and choose "Edit Series".
2. In the editor, click "Recurrence".
3. In the "Recurrence" dialog, click "Remove Recurrence".
4. Click "OK" to close the editor. All occurrences except the initial configured instance of the schedule are removed.

Note

Rather than removing a recurring schedule, you may want to change the "End by" time so you can keep a record of past occurrences.

5.4.2.6 Deleting actions and subactions

Introduction

You can delete actions and subactions. Deleting an action from a schedule does not remove its configuration from the calendars. The action remains available in the "Actions" list for configuring other schedules.

Deleting an action from the Action Editor removes its configuration completely from the calendars and the "Actions" list. You cannot delete an action if it is used in a schedule.

Prerequisite

Before you can delete all occurrences of an action, you must delete the action from all schedules.

You can use the "Resources" window to find these schedules.

Example: To display all schedules that reference the action "Machine2Start", select only "Machine2Start" in the "Resources" window. The check box next to the other resource groups should not be selected.

Deleting an action from a schedule

1. Double-click an action schedule to display its configuration in the editor.
If the schedule is configured with a recurrence and you want to delete the action from the series, right-click the schedule and choose "Edit Series".
2. Choose which actions to delete:
 - To delete one or multiple actions:
Select the desired rows in the start or end actions area. Right-click and choose "Delete".
 - To delete all actions:
Right-click anywhere in the start or end actions area and choose "Clear".
3. Save the configuration.

Deleting an action configuration

1. In the Action Editor, select the action to delete.
2. Click "Delete".
The action and its associated subactions are deleted from the "Actions" list and the "Resources" window. The action is no longer available for configuring schedules.

Deleting subactions

1. In the Action Editor, select the desired action rows.
2. Right-click and choose "Delete".
The selected subactions are deleted only from this action. You must have at least one subaction configured for the action.

5.4.2.7 Deleting schedules and calendars

Introduction

You can delete schedules and calendars. Deleting a schedule removes the schedule and its associated resources from the selected calendars. The resources are not removed from the selection lists and are available for configuring other schedules. Depending on the installed Calendar Options, a resource can be an action, notification, contact, or contact group.

You can override a recurrence series by deleting a schedule on the date you do not want it to execute. This override does not change the default configuration of the recurring schedule.

Deleting a calendar removes the entire calendar and its associated schedules. A schedule referenced in the deleted calendar is removed, but remains in the other calendars.

Deleting a schedule from the calendar view

1. Right-click the schedule and choose "Delete". Optionally, click the schedule and press <Delete>.
2. If the schedule is in a recurrence series, a message displays asking if you want to delete all occurrences or only the occurrence of the selected day and time. Choose what to delete and click "OK".
Deleting the selected occurrence is an override to the schedule and does not affect the other occurrences in the series. Deleting the series deletes all occurrences of the schedule.

Deleting a schedule from the editor

1. Double-click a schedule to display its configuration in the editor.
2. To delete a schedule from a calendar, click the "Calendar" arrow and unselect the calendar. Click "OK".
3. To delete a schedule from all selected calendars, click "Delete".
If the schedule is in a recurrence series, only the occurrence for the selected day and time is deleted.

Deleting a recurring schedule from the editor

1. Right-click a schedule and choose "Edit Series".
2. In the editor, click "Delete".
All occurrences of the schedule are deleted.

Note

Rather than deleting a recurring schedule series, you may want to modify the schedule and change the "End by" time in the "Recurrence" dialog so you can keep a record of past occurrences.

Deleting a calendar

1. In the Calendar List Editor, select the calendar name to delete.
You cannot delete the "Default" calendar.
2. Click "Delete". When the confirmation message to delete this calendar and its associated schedules appears, click "OK".
The entire calendar and all schedules associated with this calendar are deleted permanently. The calendar name is removed from the "Resources" window in the Calendar Options Editor.

5.4.3 Configuring the Calendar Control

5.4.3.1 Calendar Control

The Calendar Control is a .NET control that can be inserted into WinCC pictures using the WinCC Graphics Designer. The control in WinCC pictures at Runtime allows operators to view calendars. The control allows an operator to create, edit, and delete schedules.

You can configure this control to display the schedules of one or more configured calendars. View options provide single or multiple months, weeks, or days in a single view of the schedules. Additionally, you can configure a multi-resource view to show the schedules of multiple resources at the same time. Each date area in a multi-resource view displays the schedules associated with the selected resource.

The values assigned to the attributes of the control's object properties determine how the calendar displays to the operators in Runtime. You can set properties for the opening calendar view, work shift view, and navigation capabilities. In addition to providing the means for displaying and editing the schedules, the control's intrinsic events can be configured to trigger tag and C-script actions.

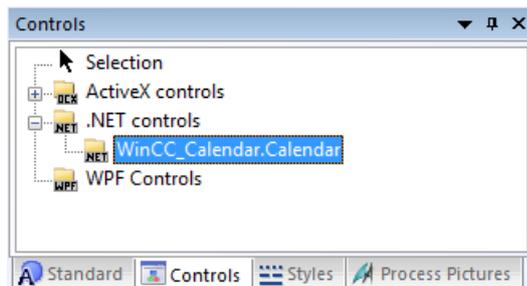
5.4.3.2 Configuring the Calendar Control

Introduction

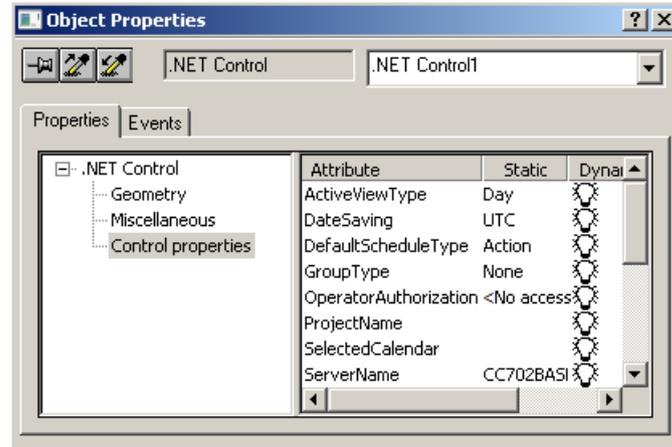
You insert the Calendar Control into WinCC pictures and configure the control to display the schedules associated with a calendar. You can customize the opening view and set properties to prevent or allow operators to use functions of the Calendar Control.

Procedure

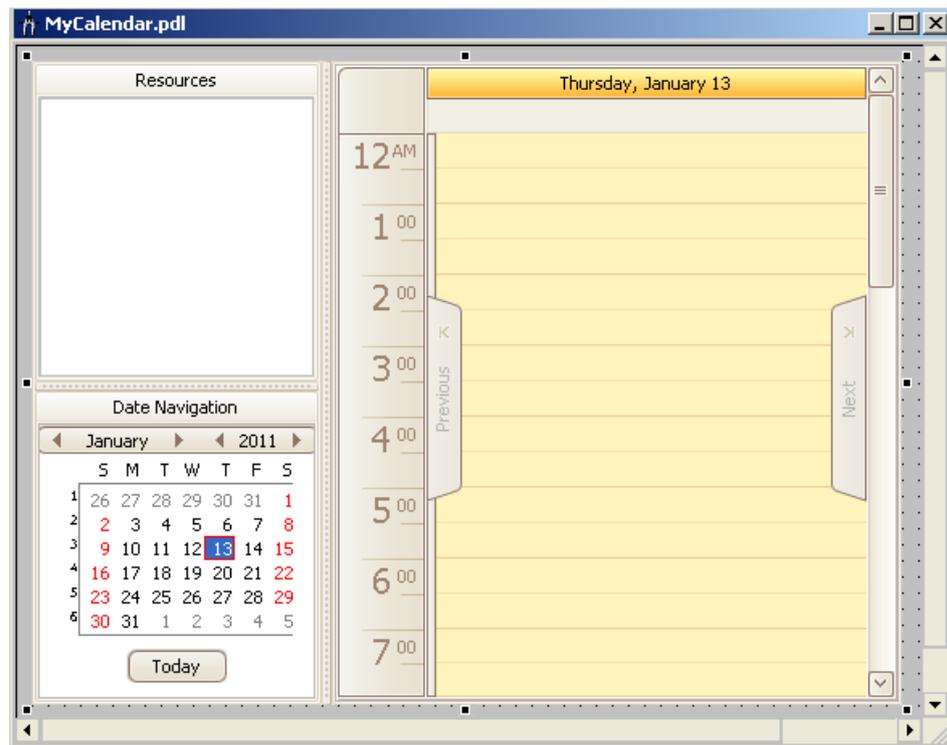
1. In the Graphics Designer, either create a new picture or open a picture where you want to insert a calendar.
2. In the Object Palette, click the "Controls" tab. Under ".NET controls", click "WinCC_Calendar.Calendar" and drag the control to the desired size in the picture.



3. Double-click the control. Click "Control properties" and set the attributes:
 - To configure how you want the calendar to display, set the appearance attributes (Page 98) of the object properties.



- To prevent or allow operators to use functions of the Calendar Control, set the navigation and usage attributes (Page 99) of the object properties.
4. Save the picture.
You can click the "Activate" button on the toolbar to see the appearance of the Calendar Control in Runtime.
This figure shows the Calendar Control configured to display schedules in the day calendar view.



5.4.3.3 Changing appearance of the Calendar Control

Introduction

You can set the properties in the WinCC Calendar Control to customize the opening view of a calendar in a particular WinCC picture. Additional pictures can contain calendars set to open with different views. You can set the properties for these pictures to restrict the view and scheduling to specific areas of a process, equipment, or personnel.

Prerequisite

- You opened the Graphics Designer and configured a picture with the Calendar Control.
- The object properties dialog of the Calendar Control is open.

Setting the opening calendar view

Double-click "ActiveViewType". Choose the standard calendar view to display when the calendar is opened: "Day", "Week", "Month", "WorkWeek", or "Timeline".

If you want a multi-resource view to display, double-click "GroupType" and choose "Date" or "Resource".

The control changes to reflect the selection.

Setting the default selected calendar

Double-click "SelectedCalendar". Enter the calendar name exactly as it appears in the "Resources" window and click "OK".

In Runtime, only the specified calendar and its schedules display on initial opening.

An incorrect calendar name entry results in no calendar selected and no schedules displaying on initial opening. To have all calendars selected with schedules displaying, leave the attribute value blank.

Setting a work shift

To set the start time:

Double-click "WorkStartTime". Enter the start time in 24-hour format (hours:minutes:seconds). Click "OK".

To set the end time:

Double-click "WorkEndTime". Enter the end time in 24-hour format (hours:minutes:seconds). Click "OK".

In Runtime, the control displays the specified time period in a different color than the background color.

To restrict the calendar view to display only the work shift time period:

Double-click "ShowWorkTimeOnly" to set the attribute to "True". Double-clicking toggles between "True" and "False". The work shift is visible in the day and work week calendar views.

5.4.3.4 Changing navigation and usage of the Calendar Control

Introduction

You can set the properties in the WinCC Calendar Control to customize the navigation capabilities in Runtime. You can set properties to prevent or allow operators to use functions of the Calendar Control.

Prerequisite

- You opened the Graphics Designer and configured a picture with the Calendar Control.
- The object properties dialog of the Calendar Control is open.

Preventing resources selection

Double-click "ShowResources" to set the attribute to "False". Double-clicking toggles between "True" and "False".

When the attribute is "False", the control hides the "Resources" window. In Runtime, the operator cannot select and view other resources.

Preventing date navigation

Double-click "ShowNavigation" to set the attribute to "False". Double-clicking toggles between "True" and "False".

When the attribute is "False", the control hides the date navigation window. In Runtime, the operator cannot select a date or date range to display future or previous schedules in the data window.

Preventing schedule editing

Double-click "ViewOnly" to set the attribute to "True". Double-clicking toggles between "True" and "False".

When this attribute is "True", the control places the data window in view-only mode. In Runtime, the operator cannot create and edit schedules.

Restricting schedule editing to authorized operators

Double-click "OperatorAuthorization". Select a predefined standard authorization in the WinCC User Administrator and click "OK". User-defined authorizations are not available for selection.

A logged in operator who is not assigned with the selected authorization can only view schedules. An operator with this authorization can create and edit schedules.

When this attribute is "NoAccessProtection", an authorization is not required. All operators can create and edit schedules using the actions, contacts, and notifications they are authorized to use.

Information about user administration is in the WinCC Information System under "Working with WinCC > Structure of the User Administration".

5.4.3.5 Calendar Control object properties

Control properties

The attributes in the Calendar Control object properties let you set how the calendar is to display in Runtime. You can customize the opening view and set properties to prevent or allow operators to use functions of the calendar control.

ActiveViewType

This attribute defines the default calendar view that displays when the Calendar Options Editor is opened. The schedules in the configured calendars display in the selected view in the data window. Double-clicking the attribute displays the following choices:

Day	Displays a 24-hour day format.
Week	Displays all 7 days of the week, beginning with Monday.
Month	Displays in a monthly format, beginning with the week that contains the selected day or date range.
WorkWeek	Displays a 5-day week, 24-hour day format. A work week contains Monday through Friday.
Timeline	Displays in a timeline format. A timeline highlights 15 days and begins with the selected day or first day of a date range.

The default value is "Month".

DefaultScheduleType

This attribute defines the default schedule type to open when double-clicking a date or time slot in the Calendar Options Editor. Double-clicking the attribute displays the following choices:

Action	Sets the Action Schedule Editor to open.
Notification	Sets the Notification Schedule Editor to open.

The default value is "Action" if both Calendar Options are installed.

GroupType

This attribute defines whether to place the Calendar Control in a multi-resource view in addition to the standard calendar views. The way the grouping displays depends on the selected calendar view. Double-clicking the attribute displays the following choices:

None	Grouping is off so that only the standard calendar view is visible.
Date	Grouping is by dates displayed horizontally with the resources underneath displaying either horizontally or vertically.
Resource	Grouping is by resources displayed horizontally with the dates underneath displaying either horizontally or vertically.

The default value is "None".

OperatorAuthorization

This attribute defines whether to place the Calendar Control in view only mode for unauthorized operators. Double-clicking the attribute lets you select a predefined standard authorization in the WinCC User Administrator. User-defined authorizations are not available for selection.

A logged in operator who is not assigned with the selected authorization can only view schedules. An operator with this authorization can create and edit schedules.

Setting the attribute value to "NoAccessProtection" indicates no authorization is required. All operators can create and edit schedules using the actions, contacts, and notifications they are authorized to use.

The default value is "<No access protection>".

ProjectName

This attribute identifies the project name that is used to configure the Calendar Control for WebNavigator.

The default value is blank.

SelectedCalendar

This attribute defines whether to display the schedules of a specific calendar or all calendars when the Calendar Options Editor is opened initially in Runtime. Double-clicking the attribute opens a dialog for you to enter the calendar name exactly as it appears in the "Resources" window.

An incorrect calendar name entry results in no calendar selected and no schedules displaying on initial opening.

The default value is blank.

ServerName

This attribute identifies the server that the Calendar Option is accessing. Double-clicking the attribute opens a dialog for you to connect to a different server name.

This attribute is useful in WinCC solutions where clients can be connected to multiple servers.

The default value is the server name where the WinCC project is connected.

ShowNavigation

This attribute defines whether to allow or prevent the operator's capability to use date navigation in the calendar. Double-clicking the attribute toggles between "True" and "False".

When this attribute is "False", the control hides the "Date Navigation" window. The operator cannot select a date or date range to display future or previous schedules in the data window.

The default value is "True".

5.4 Configuration

ShowResources

This attribute defines whether to allow or prevent the operator's capability to select resources. Double-clicking the attribute toggles between "True" and "False".

When this attribute is "False", the control hides the "Resources" window. The operator cannot select and view other resources.

The default value is "True".

ShowStatus

This attribute defines whether to display or hide the status bar. Double-clicking toggles between "True" and "False".

When this attribute is "True", the operator can see the status bar.

The default value is "False".

ShowWorkTimeOnly

This attribute defines whether to restrict the day and work week calendar views to the time frame specified in the "WorkStartTime" and "WorkEndTime" attributes. Double-clicking the attribute toggles between "True" and "False".

When this attribute is "True", the calendar view displays only the work shift time period. An operator can see only the schedules within the specified work shift.

When this attribute is "False", the calendar view displays all 24 hours and the schedules.

The default value is "False".

ViewOnly

This attribute defines whether to allow or prevent the operator's capability to create and edit events. Double-clicking the attribute toggles between "True" and "False".

When this attribute is "True", the control places the data window in view-only mode and prevents the operator from creating and editing schedules.

The default value is "False".

WorkStartTime

This attribute defines a time for a work schedule shift to start in the calendar. When set with the "WorkEndTime" attribute, the control displays the specified time period in a different color than the background color. Double-clicking the attribute opens a dialog for you to enter the start time in 24-hour format (hours:minutes:seconds).

The default value is "09:00:00".

WorkEndTime

This attribute defines the time for a work schedule shift to end in the calendar. When set with the "WorkStartTime" attribute, the control displays the specified time period in a different color than the background color. Double-clicking the attribute opens a dialog for you to enter the end time in 24-hour format (hours:minutes:seconds).

The default value is "18:00:00".

5.5 Operation in Runtime

5.5.1 Calendar Scheduler in Runtime

Preconfigured schedules

The Calendar Scheduler Server executes the preconfigured action schedules and any operator-created action schedules at the specified times for a WinCC project. If action schedules are scheduled close together, the second schedule executes after the first schedule finishes.

The preconfigured action schedules and the opening view of the calendar that operators see are determined during configuration. Any functions of the Calendar Control that an operator is allowed to use can be configured.

Schedules and resource colors

In standard calendar views, a schedule displays in the color of the associated calendar. If a schedule is associated with multiple calendars, the color of the schedule displays as one of the selected calendars. Typically, the color displays as the first selected calendar when the schedule was configured.

In multi-resource views (Page 106), the color configured for a selected resource displays as the background color for the resource in the data window. The schedule displays as a neutral color to complement the background color.

The following symbols may display on a schedule:

	Displays during the start and end time of an active schedule.
	Identifies a recurring schedule.
	Indicates whether the start or end time of a schedule occurs from 0:00 to 11:59 (12:00 AM to 11:59 AM). This symbol displays in the timeline view or when the schedule covers a range of days.
	Indicates whether the start or end time of a schedule occurs from 12 to 23:59 (12:00 PM to 11:59 PM). This symbol displays in the timeline view or when the schedule covers a range of days.

Scheduling capabilities

When configured to do so, an operator can create and modify action schedules and calendars depending on the assigned authorizations. Drag and drop allows quick editing of the schedules. Any changes that the operators make take effect immediately.

5.5 Operation in Runtime

Operators cannot create actions during Runtime. They can choose only from the authorized actions available in the "Actions" list. The actions are created during configuration.

If schedules are configured to execute on startup or change, operators must confirm the activation of a schedule that becomes active due to a date/time change or the deactivation of a schedule that becomes inactive.

5.5.2 Viewing schedules and resources

Introduction

The schedules in the configured calendars display when a picture that contains the Calendar Control is opened in Runtime. The Calendar Control is configured to display in a standard calendar view or a multi-resource view (Page 106).

If the "Resources" window is configured to display, operators can view or hide the schedules for a resource. The schedules associated with the selected resources display in the data window. Depending on the installed Calendar Options, a schedule can be an action schedule or notification schedule. A resource can be an action, notification, contact, or calendar.

If the "Date Navigation" window is configured to display, operators can view schedules for a selected day or a range of dates. The calendar view changes based on the selections made in the "Date Navigation" and data windows.

Viewing schedules for selected resources

In the "Resources" window, select the resource names so that a check mark appears. The schedules for all selected resources are visible for the scheduled dates. The schedules for any calendars not selected are hidden.

When a date or time slot contains more schedules than what displays in the calendar view, an arrow displays on the date or time slot. Clicking the arrow opens the "Agenda" list to display the additional schedules that are not visible on that date or time slot. You can double-click a schedule in the list to display its configuration in the editor.

Navigating to schedules in "Date Navigation" window

Selecting dates in the "Date Navigation" window displays the schedules for the selected dates in the data window. You can do the following tasks in the "Date Navigation" window to show dates:

- Click a day to show the selected day in the day view.
- Highlight a range of days to show the selected range in the month view. You can highlight the range by dragging over the desired days. You can also click a day and press <Shift> while clicking another day.
- Click a day and then press <Ctrl> while clicking additional days to show the selected days as a series of day views.
- Click the "Today" button to show schedules for the current day in the day view.

Navigating to schedules in data window

Right-clicking on a calendar view in the data window provides various ways to navigate to schedules. The resulting view depends on the selected day and date range of the current view.

"Go to Today" from menu

Click this option to display the current day or the work week, week, month, or timeline that contains the current day. In each resulting view, the current day is highlighted. On the timeline view, the current day is the first day in the timeline.

"Go to Date" from menu

Click this option to open a dialog to enter a specific date and to select the calendar view to display. You can choose the date from a pop-up calendar. The view changes to the specified view with the work start time highlighted on the specified date.

"Go to This Day" from menu

This option is available only on the month and week views and when one date is selected. If a range of days is selected, this option is gray and cannot be selected.

With a date selected in the view, click this option to display the selected date in day view. The work start time is highlighted.

"Time Scales" and "Time Scale Captions" from menu

These options are available only on the timeline view. You can change the amount of time shown in the timeline and select which captions to display.

- Point to "Time Scales" and choose the increment of time to show in the timeline: "Year", "Quarter", "Month", "Week", "Day", "Hour", or "00:15:00". Selecting the same scale again switches between hiding and showing the scale.
- Point to "Time Scale Captions" and choose the caption for the time scale you want to see. Selecting the same caption again switches between hiding and showing the caption.

Hours and day range selection

You can select a range of hours or days in the applicable calendar views in the following ways:

- Drag over the desired hours or days in the view.
- Click an hour or day and then press <Shift> while clicking another hour or day.

"Next" and "Previous" tabs

The data window contains "Next" and "Previous" tabs. You can view the next or prior schedules in a calendar view.

- Click the "Next" tab to show the calendar view with the next schedules in the selected time span. For example, with the week view selected, clicking "Next" causes the current week view to change to the week containing schedules after the current week.
- Click the "Previous" tab to show the calendar view with the prior schedules in the selected time span.

Changing the calendar view

Standard view

Right-click in the data window. Select "Change View To" and choose a calendar view: "Day View", "Work Week View", "Week View", "Month View", or "Timeline View". The days highlighted in the resulting view depend on the day or range of days selected in the "Date Navigation" window.

Multi-resource view

Right-click in the data window. Select "Grouping" and choose a group type: "Date", "Resource", or "None". The way the grouping displays depends on the standard calendar view.

Changing the time ruler

In the day or work week view, you can customize the ruler to display in a specific time zone. You can also change the time increment that displays.

Time zone

Right-click the time ruler and choose "Customize Time Ruler". In the "Time Ruler" dialog, enter a descriptive name in the "Label" field. Choose the desired time zone and select the check box to adjust the time when daylight saving time occurs. Click "OK".

The calendar control changes to reflect the specified label name and time zone.

Time increment

Right-click the time ruler and choose the increment of time in minutes to show in the ruler: "60, 30, 15, 10, 6, 5". The ruler changes to reflect the selected increment.

Refreshing calendar data

Right-click in the "Resources" window or "Date Navigation" window and choose "Refresh".

5.5.3 Multi-resource views

Introduction

A multi-resource view allows operators to see schedules of multiple resources at the same time. A multi-resource view displays in addition to a standard calendar view. Multiple date areas are displayed vertically or horizontally. Each date area displays the schedules associated with the selected resource.

When configured to do so, operators can switch between the resource and date views. They can disable the multi-resource view so that only a standard calendar view displays.

Depending on the installed Calendar Options, a schedule can be an action schedule or notification schedule. A resource can be an action, notification, contact, or calendar.

Color configuration and navigation

A typical multi-resource view would be viewing the schedules of three contacts or the schedules of production lines.

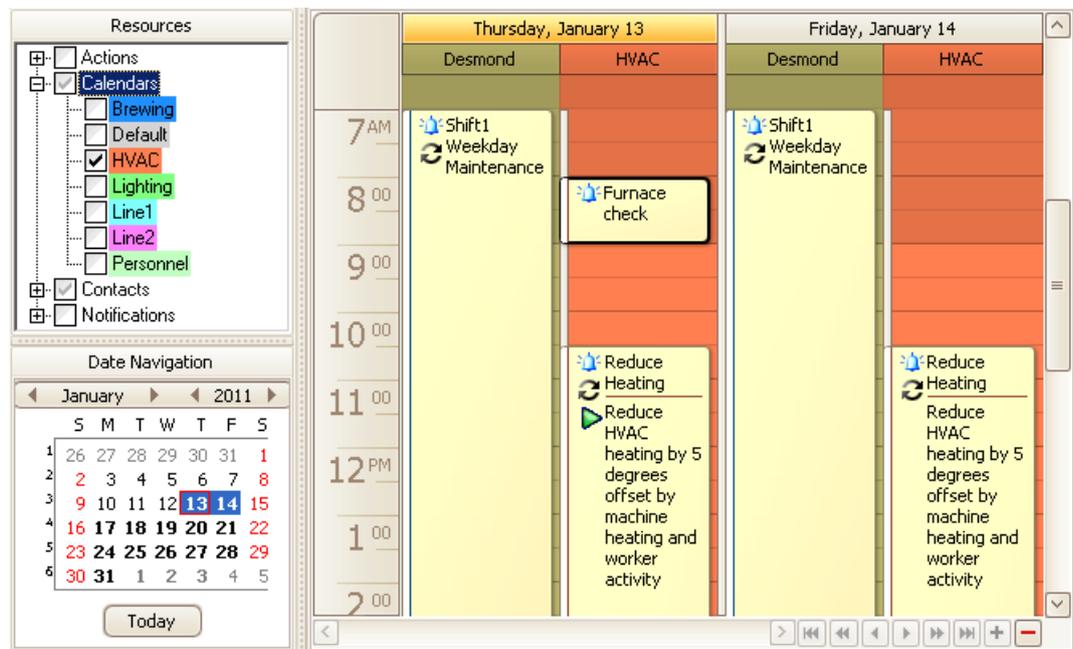
For quick recognition, the color configured for a selected resource displays as the background color for the resource in the data window. The schedules display as a neutral color to complement the background color.

When several resources are selected, the readability of the schedules is reduced. Operators can use the navigation toolbar to decrease the visible resources. The toolbar provides navigation, scrolling, and increasing/decreasing the number of visible resources.

Date view

When the multi-resource view is "Date", the view shows the grouping by dates displayed horizontally with the resources underneath displaying either horizontally or vertically. Only schedules for the resources selected in the "Resources" window are visible in the views.

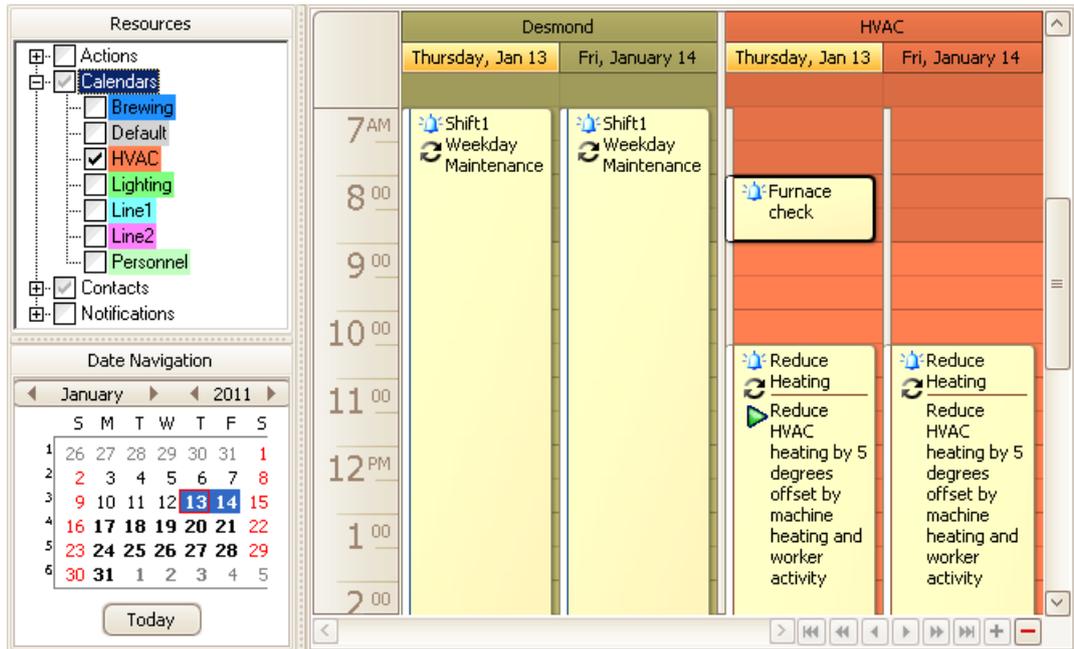
The following figure shows the schedules for two calendars and a contact displayed with the multi-resource view as date. The standard calendar view is work week.



Resource view

When the multi-resource view is "Resource", the view shows the grouping by resources displayed horizontally with the dates underneath displaying either horizontally or vertically. Only schedules for the resources selected in the "Resources" window are visible in the views.

The following figure shows the same week schedules displayed with the multi-resource view as resource.



5.5.4 Creating action schedules

Introduction

Operators can create action schedules in Runtime using only configured actions that they are authorized to use. An operator not assigned the authorization for any of the actions cannot create any schedules. Rather than adding the same schedule to a calendar several times, operators can configure one recurring schedule that displays in the calendar at the specified dates and times.

Creating an action schedule in Runtime is the same as during configuration. For detailed instructions, see the "Configuration" chapter in this documentation.

Procedure

1. Double-click a date or time slot to open the Action Schedule Editor. Optionally, right-click a date or time slot and choose "New Action Schedule".

Note

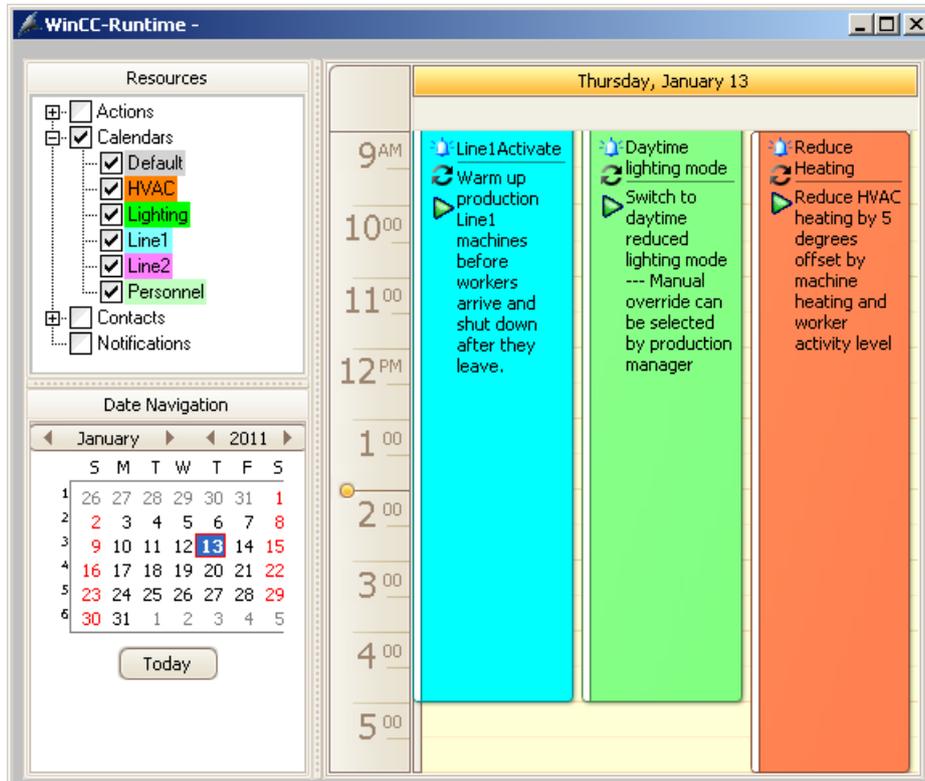
If other schedule types are available and the default schedule type is not action, you must right-click and choose "New Action Schedule" for this editor to open.

2. Configure the action schedule:
 - Enter a name for the schedule. Optionally, enter a description.
 - Set the time the schedule is to start and end.
 - Select the actions to execute at the selected start time.
 - Optionally, select the actions to execute at the selected end time and click "OK".
 - Select the calendar names where the schedule is to occur.
 - Indicate whether to execute the schedule due to a startup/shutdown or a date/time change.
 - Optionally, configure this schedule to repeat.
3. After you finish configuring the schedule, click "OK".

Results

The action schedule appears in the selected calendars at the specified times. The color of a schedule is the same as its associated calendar. The way the schedule color (Page 103) displays depends on the selection of multiple calendars in the "Resources" window and a multi-resource view.

An arrow displays in a date or time slot when it contains schedules that are not visible. Clicking the arrow displays the additional schedules in the "Agenda" list.



5.5.5 Modifying action schedules

Introduction

Operators can modify only schedules that contain actions they are authorized to use. Operators not assigned the authorization for any of the preconfigured actions cannot modify any schedules.

Modifying an action schedule in Runtime is the same as during configuration. For detailed instructions, see the "Configuration" chapter in this documentation.

Using the Action Schedule Editor

1. Double-click an action schedule to display its configuration.
2. Make the desired changes in the editor:
 - Renaming schedule:
Enter the text in the "Name" and "Description" fields.
 - Changing schedule time:
Set the time the schedule is to start and end.
 - Deleting actions:
Select the desired rows. Right-click and choose "Delete". To delete all actions, right-click and choose "Clear".
 - Adding actions:
Click "Select", choose the actions, and click "OK".
 - Changing execution order of actions:
Click a row to highlight it. Drag the action to the desired location. A red line appears at the point where the action will move.
 - Adding or changing recurrence:
Click "Recurrence" and set the recurrence pattern and time.
 - Removing recurrence:
Click "Recurrence" and then click "Remove Recurrence".
 - Changing associated calendar:
Click the "Calendar" arrow and select the calendars where the schedule is to display.
3. After you finish modifying the schedule, click "OK".

Dragging and dropping schedules

Quickly modify a schedule by dragging it to the desired date and time in a calendar view or to a date in the "Date Navigation" window. The day and work week views let you quickly change the duration of a schedule by dragging its start or end border to the desired time.

If the schedule contains an action that you are not authorized to use, the schedule remains at the configured date and time. If you have sufficient permissions, the schedule moves to the new date and time.

5.5.6 Deleting and restoring schedules

Introduction

Operators can modify schedules that contain resources they are authorized to use. Operators not assigned the authorization for any of the preconfigured resources cannot modify any schedules. Depending on the installed Calendar Options, a resource can be an action, notification, contact, or contact group.

Deleting schedules

Quickly delete a schedule from all calendars by right-clicking the schedule and choosing "Delete". Optionally, you can select the schedule and press <Delete>. If the schedule is in a recurrence series, you will choose whether to delete all occurrences or only the occurrence of the selected day and time.

Deleting the selected occurrence is an override to the schedule and does not affect the other occurrences in the series. This capability is helpful when you do not want the schedule to execute on the selected date. Deleting the series deletes all occurrences of the schedule.

From the schedule editor, you can delete a schedule or an occurrence on the selected day in a recurring schedule by clicking the "Delete" button. Clicking the "Calendars" arrow and unselecting a calendar lets you remove the schedule from that calendar.

Restoring a recurring schedule

You can restore all modified and deleted occurrences to the initial configured state of the recurring schedule:

1. Right-click any occurrence in the recurring schedule and choose "Edit Series".
2. In the editor, click "Recurrence".
3. In the "Recurrence" dialog, click "OK" without making any changes.
4. Click "OK" to close the editor.

WinCC/Event Notifier Documentation

6.1 Introduction

The Event Notifier is a WinCC option that provides an easy way to manage time-based scheduling of personnel to receive notifications from automated processes that WinCC supervises. The Event Notifier provides a way for users to easily schedule the right persons to notify of an alarm condition based on the time of day and the day of week.

With the WinCC/Event Notifier, you can:

- Easily send alarms to a specific person's cell phone via email, based on work schedules.
- Schedule recurring work times with overrides for holidays or maintenance activities.
- See when a person is scheduled by filtering of views by personnel.
- Verify notifications are sufficiently staffed by filtering of views by alarm category.
- Secure operator scheduling through user authorizations.
- Choose the system configuration where this option is installed: WinCC Client/Server, multi-user systems, redundant systems, and WebNavigator.

6.2 Calendar Options

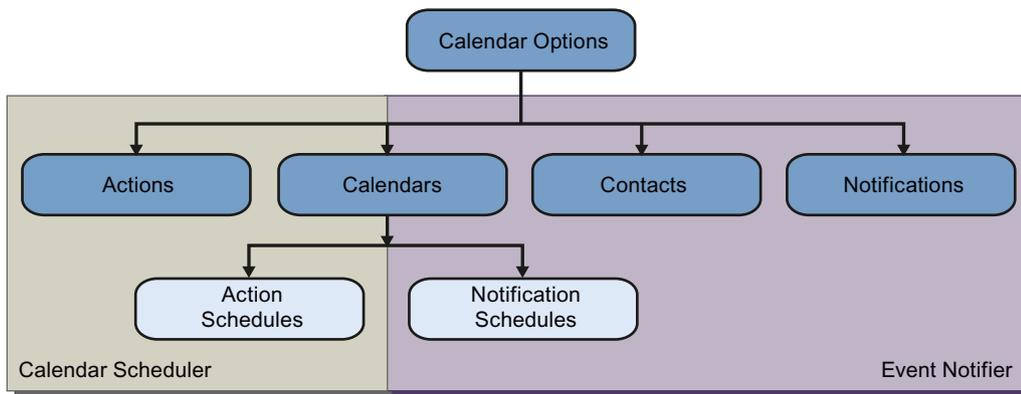
6.2.1 How Calendar Options work

Structure

The WinCC/Calendar Options include the WinCC/Calendar Scheduler and the WinCC/Event Notifier. A license is required for each option. The entry "Calendar Options" appears in the WinCC Explorer after the installation.

The Calendar Options share components. Only the functionality for the installed option is available. When both options are installed, the functionality of both options is available. The following diagram shows the relationship of editors used when configuring the Calendar Scheduler and the Event Notifier. Light blue indicates Runtime.

6.2 Calendar Options



Each Calendar Option has a calendar that serves as a named grouping of action schedules or notification schedules. The Calendar Scheduler has action schedules that reference one or more actions that will execute when the schedule starts and ends. The Event Notifier has notification schedules that specify a start and end time when a list of referenced contacts can be sent alarms that match the referenced notifications.

Calendar Options components

The Calendar Options consist of server and client components that can be installed together on the same computer. These components can be installed across multiple computers in the WinCC Client/Server, multi-user, redundant, and WebNavigator system configurations.

Calendar Options Editor

The Calendar Options Editor is accessed from the WinCC Explorer. The Calendar Options Editor is used to set up or edit a WinCC project's Calendar Scheduler or Event Notifier configuration.

The Calendar Scheduler lets you create schedules to execute actions. The Event Notifier lets you create schedules to send email notifications to specified contacts when WinCC alarm messages match the configured notification criteria. You would set an authorization on an action, notification, or contact to prevent unauthorized use by operators.

Calendar Scheduler Server

The Calendar Scheduler Server runs as a background service on each WinCC Server in the project executing the configured activities. The Calendar Scheduler Server starts when the WinCC project is activated in Runtime and stops when Runtime is deactivated.

The Calendar Scheduler follows the same redundancy model as other WinCC functions. The Calendar Scheduler Servers start on both WinCC Servers. Only the server located on the active server executes actions. During a server switch, the standby server becomes active and executes the actions.

Configuration data (actions and calendars) is synchronized manually between the redundant servers. For information, see the WinCC Information System under "Working with WinCC >

Working with Projects > Copying and Duplicating Projects". Runtime data (schedules) is synchronized automatically.

Note

Time synchronization between the pair of redundant WinCC servers is essential for correct operation.

Note

In Runtime, making changes from the standby server is not supported in this version. You can only make changes on the master server.

Event Notifier Server

The Event Notifier Server runs as a background service on each WinCC Server in the project sending the configured notifications to the scheduled contacts. The Event Notifier Server starts when the WinCC project is activated in Runtime and stops when Runtime is deactivated. The Event Notifier Server loads the configuration information at startup and loads any operator changes immediately.

The Event Notifier follows the same redundancy model as other WinCC functions. The Event Notifier Servers start on both WinCC Servers. Only the server located on the active server sends emails. During a server switch, the standby server becomes active without loss of Event Notifier data. For example: A contact who received an email from the primary server is allowed to acknowledge the email after a switch to the secondary server.

Configuration data (notifications, contacts, and calendars) is synchronized manually between the redundant servers. For information, see the WinCC Information System under "Working with WinCC > Working with Projects > Copying and Duplicating Projects". Runtime data (schedules) is synchronized automatically.

Note

Time synchronization between the pair of redundant WinCC servers is essential for correct operation.

Note

In Runtime, making changes from the standby server is not supported in this version. You can only make changes on the master server.

Calendar Control

The Calendar Control can be placed into one or more WinCC pictures using the WinCC Graphics Designer. You would configure this control to display and manage the subset of schedules specific to the portion of the application's process used in the picture.

A server package cannot be imported or deleted while a WinCC Client is running. The Calendar Option servers do not recognize the imported or deleted package because the Calendar Control reads at startup.

Calendar Scheduler in Runtime

In Runtime, operators use the Calendar Control to view and manage the time-based activities. Operators can create and edit action schedules only with the preconfigured actions they are authorized to use.

When operators attempt to select an action they are not authorized to use, they receive the "Insufficient permission" message. When they attempt to edit action schedules that contain at least one unauthorized action, the schedule remains unchanged at its preconfigured date and time.

Event Notifier in Runtime

In Runtime, operators use the Calendar Control to view and manage the scheduling of personnel to receive email when a new alarm matches the configured notifications. Operators can create and edit notification schedules only with the preconfigured notifications and contacts they are authorized to use. If configured to do so, operators can create and edit contacts and contact groups.

When operators attempt to select a notification or contact they are not authorized to use, they receive the "Insufficient permission" message. When they attempt to edit notification schedules that contain at least one unauthorized notification or contact, the schedule remains unchanged at its preconfigured date and time.

Time display format

The Calendar Scheduler Server and the Event Notifier Server save the date and time in the UTC (Coordinated Universal Time) format. The Calendar Options Editor and Calendar Control display time based on the local time setting of the client computer. This allows multiple operators using WinCC systems with clients located in different time zones to view and manage schedules in their own time.

Alternate terminology

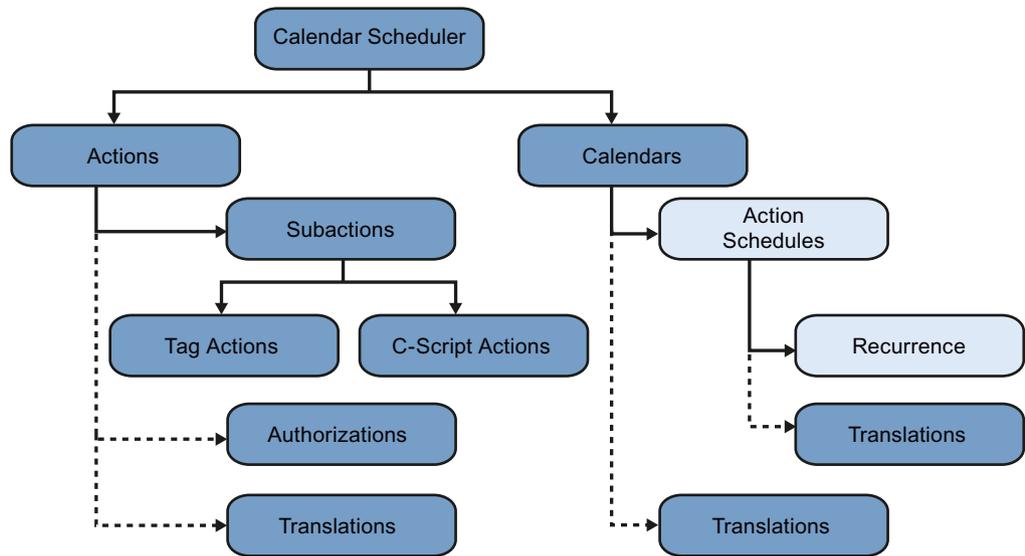
Throughout the documentation, alternate terminology may be used to represent names where functionality is the same in the Calendar Options.

Terminology	Calendar Scheduler	Event Notifier
schedule	action schedule	notification schedule
resource	action, calendar	notification, contact, contact group, calendar

6.2.2 Calendar Scheduler

Structure

The Calendar Scheduler lets you create schedules to execute actions. The following diagram shows the relationship of editors and dialogs used when configuring the Calendar Scheduler. Light blue indicates Runtime.



- "Calendar": Serves as a named grouping of configured action schedules. Optionally, a calendar name can have translated text.
- "Action Schedule": References one or more actions that will execute when the schedule starts and ends (if configured). Optionally, the schedule can be defined to reoccur, and the schedule name can have translated text.
- "Action": Contains at least one subaction. A subaction represents either a tag setting or C-script execution. Optionally, an action can have a security authorization, and the action name can have translated text.

Workflow

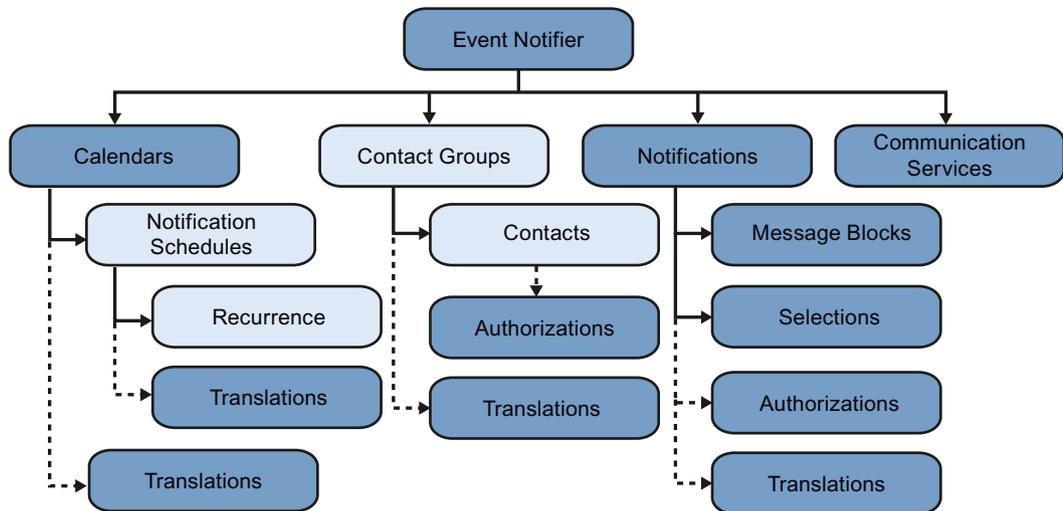
In a typical WinCC project, you would configure all the actions necessary to control the process, independent of the action schedules. In each action, enter a descriptive name for each of the project's languages and select the user authorization necessary to create a schedule using the action.

During Runtime, operators can create and edit schedules that execute actions for which they are authorized.

6.2.3 Event Notifier

Structure

The Event Notifier lets you create schedules to send email notifications to specified contacts when WinCC alarms or messages match the configured notification criteria. The following diagram shows the relationship of editors and dialogs when configuring the Event Notifier. Light blue indicates Runtime.



- "Calendar": Serves as a named grouping of configured notification schedules. Optionally, a calendar name can have translated text.
- "Notification Schedule": Specifies a time frame that the referenced "Contacts" or "Contact Groups" can be sent alarms that match the referenced "Notifications". Associated with each contact is an "Escalation" time that the alarm must remain unacknowledged before the contact is notified. Optionally, the schedule can be defined to reoccur, and the schedule name can have translated text.
- "Contact": Specifies an individual that can be sent notifications. Each contact is a WinCC user with a specified email address. Each contact identifies a communication service through which notification email is sent. Optionally, a contact can have a security authorization. A "Contact Group" is a list of contacts. Messages may be sent to all contacts in the contact group. Optionally, a contact group name can have translated text.
- "Notification": Identifies a set of alarms or other WinCC messages. Each notification contains message blocks and selection filter criteria to use for the alarm output. The configuration defines the information to send when an alarm occurs. Optionally, a notification can have a security authorization, and the notification name can have translated text.
- "Communication Service": Specifies how WinCC is to connect to the email server or other communication service that will deliver notification email to contacts and their responses to the email. Multiple services can be configured.

Workflow

In a typical WinCC project, you would:

1. Configure a communication service during initial project setup.
2. Configure the notifications and contacts necessary for your application, independent of the notification schedules.
 - In each notification, enter a descriptive name for each of the project's languages. Select the user authorization necessary to create schedules using the notification.
 - In each contact group, enter a descriptive name for each of the project's languages. Drag contacts to the contact groups.
 - In each contact, enter its email address and server name. Select the user authorization necessary to create schedules using the contact.

During Runtime, operators can create and edit schedules using contacts and notifications for which they are authorized. Occasionally, operators may be allowed to create and edit contacts and contact groups. WinCC alarm messages that match the notifications in the active schedules may be sent to the specified contacts. Messages are sent to a contact only if the alarm is not acknowledged before the contact's configured escalation time.

6.2.4 Calendar Options System Tags

Calendar Options has the following system tags. These tags are displaying specific message/ information for an action or event at runtime. These tags will be created as "internal tag" and are part of the "Calendar" group in WinCC Tag Management.

@CalendarMsg

This tag holds the string value for information related to an appointment (while creating/ Modifying/deleting) and resources (Calendar changed/Notification changed/contact changed/ action changed). The message string contains information such as appointment status, machine name, and event name.

@EventMsg

This tag holds the string value of an initiated events. The message string contains information such as machine name, server status (server up/server initialized), event status (start executed/ stop executed), appointment Id, and appointment subject.

@ExecuteMsg

This tag holds the string value of an executed action/sub-action. The message string contains information such as system Id, executed action/sub-action, executed action/sub-action Id.

6.3 Working with Event Notifier

@SynchronizeMsg

This tag holds the string value of the synchronized events. The message string contains information related to the synchronization of data of the actual server machine to redundant server machine

6.3 Working with Event Notifier

6.3.1 Email guidelines

Introduction

Email provides an easy way to notify the right persons about an alarm condition. There are processing and security situations to consider when using email. Developing and implementing email security practices are necessary to keep email communication as secure as possible. The following guidelines provide general email processing and security information to use with the Event Notifier.

Email processing

Guideline	Comments
Email is not a guaranteed form of delivery.	Email is not recommended as the primary method for acknowledging alarms. A best practice is to establish a default plan for acknowledging alarms and to use email as an alternate method. This way the alarms can get acknowledged if the contacts do not receive the notification email.
Overloading the input buffer could cause the email server to delay the processing of the email acknowledgments.	To control the mailbox size, configure a message size limit on the received messages. This way the email server rejects messages greater than a specified number of bytes.

Email security

Guideline	Comments
Email is not a secure method for transmitting sensitive data.	<ul style="list-style-type: none"> • Avoid configuring proprietary information in the notifications that may display in email. • Configure the communication service to use a secure version of TLS for better protection from sniffing and from spoofed acknowledgment responses.
Some features of the Event Notifier provide a level of security.	<ul style="list-style-type: none"> • Configure notifications and contacts with a security authorization to allow the operators to create and edit schedules only using the contacts and notifications for which they are authorized. • Prevent contacts from acknowledging a notification email by disabling the acknowledgment option in the notification. In this case, the contacts receive a notification email but cannot send an acknowledgment response. This is useful when an alarm is a high-priority critical alarm and only an authorized operator can acknowledge the alarm. If email acknowledgment was allowed, the alarm acknowledgment could be spoofed.
Security concepts provide methods to ensure that only authenticated users can create and modify scheduling information.	<ul style="list-style-type: none"> • Understand security concepts and develop solutions to create a secure network for production plants. The operational guidelines document for the WinCC security concept is available at the following URL: http://support.automation.siemens.com/WW/view/en/60119725 (http://support.automation.siemens.com/WW/view/en/60119725) • Use VPN for point-to-point encryption to provide a secured network connection.

6.3.2 Opening the Calendar Options Editor

Introduction

The Calendar Options Editor can be started only for the project currently open in the WinCC Explorer. The Calendar Options Editor contains elements of the Calendar Scheduler and the Event Notifier when both options are installed. If only one option is installed, the editor provides the elements of the installed option.

Procedure

You can open the Calendar Options Editor in the navigation window of WinCC Explorer in the following ways:

- Right-click "Calendar Options" and choose the installed option: "Open Calendar Scheduler" or "Open Event Notifier".
- Expand "Calendar Options" and double-click the installed option: "Calendar Scheduler" or "Event Notifier".

6.3 Working with Event Notifier

- Expand "Calendar Options" and select "Calendar Scheduler". In the data window, right-click "Action Schedule" and choose "Open".
- Expand "Calendar Options" and select "Event Notifier". In the data window, right-click "Notification Schedule" and choose "Open".

Note

The option you select determines which schedule type to open when double-clicking a date or time slot. The default schedule type for Calendar Scheduler is "Action". The default schedule type for Event Notifier is "Notification".

Results

The Calendar Options Editor starts and a calendar is opened in the data window. A list of all available resources is visible. The month view displays the first time this editor is opened. If you change the calendar view, that view will display anytime the editor is opened.

6.3.3 Calendar Options Editor

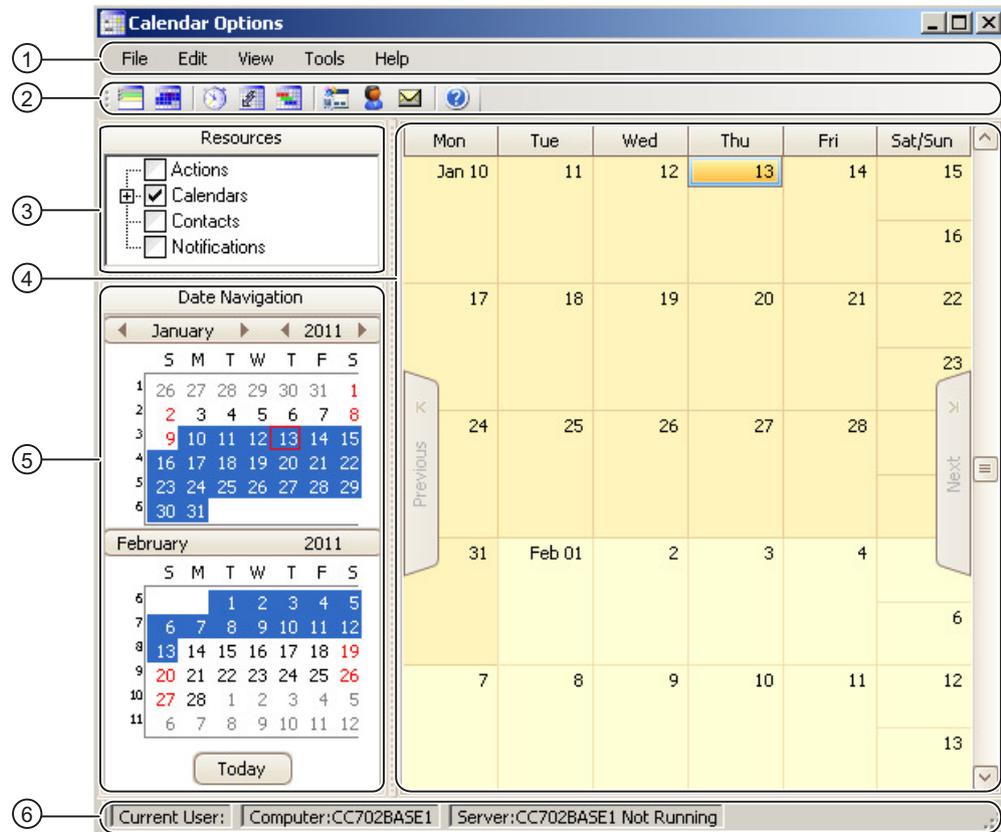
6.3.3.1 Calendar Options Editor elements

Introduction

When you start a Calendar Option in WinCC Explorer, the Calendar Options Editor is opened. The Calendar Options Editor is used to configure a project's initial time-based activities in the Calendar Scheduler or time-based scheduling of personnel to receive notifications in the Event Notifier. Only the elements of the installed Calendar Option display.

Elements of the Calendar Options Editor

The user interface of the Calendar Options Editor consists of the following elements:



- ① Menu bar
- ② Toolbar
- ③ Resources window
- ④ Data window
- ⑤ Date Navigation window
- ⑥ Status bar

6.3.3.2 Menu bar

Introduction

The menu bar includes the commands that you can use in the Calendar Options Editor. Some commands can be activated using the key combinations (shortcut keys). The following tables provide brief information on the commands in the menu bar.

Only the menu commands of the installed Calendar Options are visible.

6.3 Working with Event Notifier

File menu

The File menu includes one command:

Command	Key combination	Function
Exit	<Alt+F4>	Closes the Calendar Options Editor.

Edit menu

The Edit menu includes the following commands:

Command	Key combination	Option	Function
Action Schedules	<Ctrl+N>	C	Opens the Action Schedule Editor with the next default, unconfigured action schedule name displaying.
Actions	---	C	Opens the Action Editor with the next default, unconfigured action name displaying.
Calendars	---	C E	Opens the Calendar List Editor with the next default calendar name displaying.
Notification Schedules	<Ctrl+N>	E	Opens the Notification Schedule Editor with the next default, unconfigured notification schedule name displaying.
Contacts	---	E	Opens the Contact Editor with the list of WinCC users and groups displaying so you can create contacts and contact groups.
Notifications	---	E	Opens the Notification Editor with the next default, unconfigured notification name displaying.

"C": Visible when Calendar Scheduler is installed.

"E": Visible when Event Notifier is installed.

View menu

The View menu includes the following commands:

Command	Key combination	Function
Day View	---	Displays all schedules in a 24-hour day format for the selected day.
Work Week View	---	Displays all schedules in a 5-day week, 24-hour day format. A work week contains Monday through Friday and begins with the selected Monday or with the Monday prior to the selected day or date range.
Week View	---	Displays all schedules for the selected week. A week includes all 7 days of the week and begins with the selected Monday or with the Monday prior to the selected day or date range.
Month View	---	Displays all schedules in a monthly format. A month begins with the week containing the selected day or date range.

Command	Key combination	Function
Timeline View	---	Displays all schedules in a timeline format. A timeline highlights 15 days and begins with the selected day or first day of a date range.
Toolbar	---	Displays or hides the toolbar.
Status Bar	---	Displays or hides the status bar.
Go to This Day	---	With the month or week view visible and one date selected, this command displays the selected date in day view. The work start time is highlighted. This command is not available in the other views.
Go to Today	---	Displays schedules for the current day or for the work week, week, month, or timeline that contains the current day. In each resulting view, the current day is highlighted. On the timeline view, the current day is the first day in the timeline.
Go to Date	---	Opens a dialog for you to enter a specific date and which calendar view to display. You can choose the date from a pop-up calendar. The view changes to the specified view with the work start time highlighted on the specified date.
Grouping	---	Displays the schedules in multi-resource views in addition to the standard calendar views. The way the grouping displays depends on the selected calendar view. <ul style="list-style-type: none"> • "None": Grouping is off so that only the standard calendar view is visible. • "Date": Grouping is by the dates displayed horizontally with the selected resources underneath displaying either horizontally or vertically. • "Resource": Grouping is by the selected resources displayed horizontally with the dates underneath displaying either horizontally or vertically.
Preferences	---	If more than one Calendar Option is installed, this command sets the default schedule type to open when a day or time slot in the data window is double-clicked. The schedule type can be an "Action" or "Notification".
Time Scales	---	With the timeline view visible, this command changes the increment of time to display in the timeline. Selecting the same scale again switches between hiding and showing the scale.
Time Scale Captions	---	With the timeline view visible, this command sets the time scale caption to display in the timeline. Selecting the same caption again switches between hiding and showing the caption.
Refresh	F5	Refreshes the data in the Calendar Options Editor.

Tools menu

The Tools menu includes the following commands:

Command	Key combination	Function
Language	---	Displays the "Select Language" dialog so you can change the configuration language of the Calendar Options and WinCC.
Servers	---	Displays the server names when multiple servers are configured. You can choose a server and have the WinCC project connect to a different server.

Help menu

The Help menu includes the following commands:

Command	Key combination	Function
Contents and Index	---	Opens the Calendar Options Information System.
Direct Help	---	Activates the direct help (What's this?).
About Calendar Options	---	Displays the installed version and the installed components of the Calendar Options.

6.3.3.3 Toolbar

The toolbar contains buttons that allow you to quickly activate commands. You can switch between hiding and showing the toolbar by clicking "View > Toolbar". Only the toolbar buttons of the installed Calendar Options are visible.

Selecting the toolbar and dragging it along the borders of the Calendar Options Editor lets you move the toolbar. You can reposition the toolbar by moving it either left and right or up and down.

Icon	Tooltip	Option	Description
	Hide/Show Resources	C E	Switches between showing and hiding the "Resources" window in the Calendar Options Editor.
	Hide/Show Date Navigation	C E	Switches between showing and hiding the "Date Navigation" window in the Calendar Options Editor.
	Action Schedule Editor	C	Opens the Action Schedule Editor with the next default, unconfigured action schedule name displaying.
	Action Editor	C	Opens the Action Editor with the next default, unconfigured action name displaying.
	Calendar List Editor	C E	Opens the Calendar List Editor with the next default calendar name displaying.
	Notification Schedule Editor	E	Opens the Notification Schedule Editor with the next default, unconfigured notification schedule name displaying.

Icon	Tooltip	Option	Description
	Contact Editor	E	Opens the Contact Editor with the list of WinCC users and groups displaying so you can create contacts and contact groups.
	Notification Editor	E	Opens the Notification Editor with the next default, unconfigured notification name displaying.
	Calendar Options Help	C E	Opens the Calendar Options Information System.

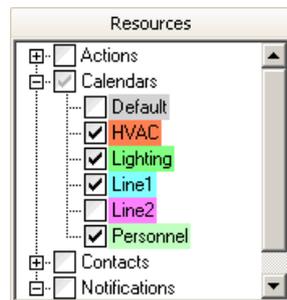
"C": Visible when Calendar Scheduler is installed.

"E": Visible when Event Notifier is installed.

6.3.3.4 "Resources" window

The "Resources" window displays a grouping of the configured resource names and determines which resources to show in the data window. Depending on the installed Calendar Options, a resource can be an action, notification, contact, or calendar.

For quick recognition, the color configured for a resource displays in the "Resources" window. The resources are grouped by resource type.



Selecting the check box next to a resource group selects all resources in the group and displays a black check mark. Expanding the group and selecting individual resources changes the check mark color to gray for the group.

All selected resources display in the data window, based on a standard calendar view or a multi-resource view.

6.3.3.5 "Date Navigation" window

The "Date Navigation" window controls the date or date range to display in the data window. The number of consecutive months that display in this window depends on the size of the Calendar Options Editor window. Clicking a day or highlighting a range of days in this window displays the selected day or range of days in the data window. Clicking the left and right arrows next to the month and year allows you to quickly move through the months and years in the calendar.

6.3.3.6 Data window

Data area

The data window displays the date range and the schedules for the resources selected in the "Resources" window. The way the data displays in this window depends on the selected calendar view. A standard calendar view can be a day, work week, week, month, or timeline. Each view displays the schedules in the color configured for the associated calendar. If a schedule is associated with multiple calendars, the color of the schedule displays as the first selected calendar when the schedule was configured.

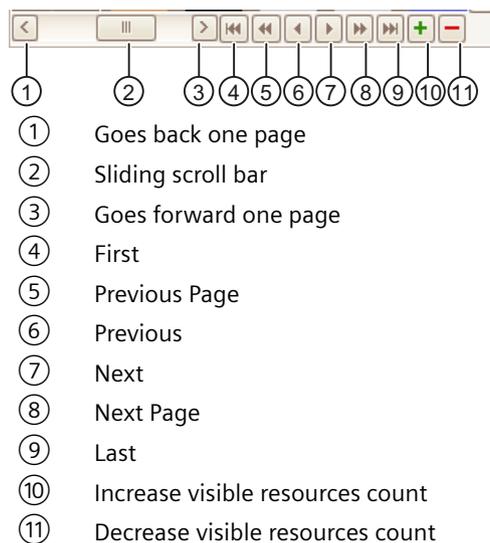
In addition to the standard calendar views, the data window can display multi-resource views. In these views, multiple date areas are displayed vertically or horizontally. The color configured for a selected resource displays as the background color for the resource. Each date area displays the schedules associated with the selected resource. The schedules display as a neutral color to complement the background color. Depending on the installed Calendar Options, a resource can be an action, notification, contact, or calendar.

Double-clicking a day, time slot, or schedule in the data window opens the editor, so you can create a schedule or edit an existing one. You can also highlight a range of days and create a schedule for the duration of the selected days.

Navigating

On the left and right borders of the data window are "Previous" and "Next" tabs. These tabs are available when the selected calendars contain schedules not visible in the current view. Clicking an available tab either advances the view to display the next schedule or goes backwards to the previous schedule.

When multi-resource view is selected, a navigation toolbar displays for working with schedules. The toolbar provides navigating, scrolling, and increasing/decreasing the number of visible resources.



6.3.3.7 Status bar

The status bar displays the current user logged in to use the Calendar Options Editor and indicates whether the server is running or not running. The status bar also displays the server name and computer name where the WinCC project is connected.

6.3.3.8 "Agenda" list

Introduction

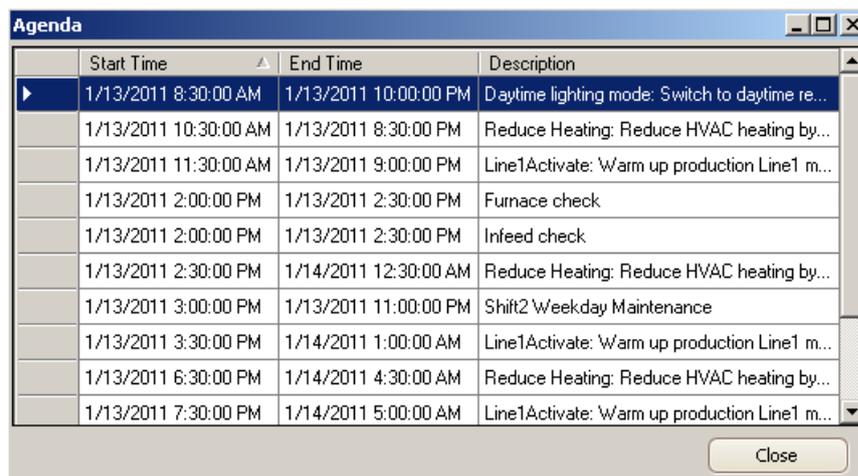
The "Agenda" list is opened from the data window in the Calendar Options Editor.

When a date or time slot contains more schedules than what displays in the calendar view, an arrow displays on the date or time slot. Clicking the arrow opens the "Agenda" list to display the additional schedules that are not visible on that date or time slot.

Usage

In the "Agenda" list, you can:

- Double-click a schedule to display its configuration in the editor.
- Click a column heading to sort the schedules in ascending or descending order by start time, end time, or description.



	Start Time	End Time	Description
▶	1/13/2011 8:30:00 AM	1/13/2011 10:00:00 PM	Daytime lighting mode: Switch to daytime re...
	1/13/2011 10:30:00 AM	1/13/2011 8:30:00 PM	Reduce Heating: Reduce HVAC heating by...
	1/13/2011 11:30:00 AM	1/13/2011 9:00:00 PM	Line1Activate: Warm up production Line1 m...
	1/13/2011 2:00:00 PM	1/13/2011 2:30:00 PM	Furnace check
	1/13/2011 2:00:00 PM	1/13/2011 2:30:00 PM	Infeed check
	1/13/2011 2:30:00 PM	1/14/2011 12:30:00 AM	Reduce Heating: Reduce HVAC heating by...
	1/13/2011 3:00:00 PM	1/13/2011 11:00:00 PM	Shift2 Weekday Maintenance
	1/13/2011 3:30:00 PM	1/14/2011 1:00:00 AM	Line1Activate: Warm up production Line1 m...
	1/13/2011 6:30:00 PM	1/14/2011 4:30:00 AM	Reduce Heating: Reduce HVAC heating by...
	1/13/2011 7:30:00 PM	1/14/2011 5:00:00 AM	Line1Activate: Warm up production Line1 m...

6.3.4 Opening the Notification Schedule Editor

Introduction

The Notification Schedule Editor is used to create, rename, modify, and delete notification schedules. This editor lets you set the start and end time for the schedule to be activated and deactivated.

Procedure

You can open the Notification Schedule Editor in the following ways:

- From the toolbar, click .
- From the menu bar, select "Edit > Notification Schedules".
- In the data window:
 - Double-click a date or time slot.
 - Right-click a date or time slot and choose "New Notification Schedule".
 - Double-click a notification schedule.
 - Right-click a notification schedule and choose "Open". For all occurrences in a recurring schedule, right-click and choose "Edit Series".

Note

If other schedule types are available, the notification schedule preference must be selected as the default schedule type for this editor to open when double-clicking a date or time slot. To set the preference, click "View > Preferences > Default Schedule Type > Notification".

- From the "Agenda" list, double-click a notification schedule.

Results

When the Notification Schedule Editor is opened from the toolbar or menu bar, a default unconfigured notification schedule displays. Opening a configured notification schedule displays its configuration.

Notification Schedule

Name: Shift1 Weekday Maintenance New Delete

Description:

Start Time: 1/13/2011 7:00:00 AM

End Time: 1/13/2011 3:00:00 PM

Contacts	
Name	Escalation
Shift1MaintenanceStaff	0 min
Faraday	2 min
Production Managers	5 min
Plant Manager	15 min
▶*	0 min

Notifications	
Name	
Leak Detected	
Temperature Fault	
Valve Fault	
▶*	

Calendar: Brewing

OK Apply Recurrence Help Cancel

6.3.5 Opening the Contact Editor

Introduction

The Contact Editor is used to create, rename, modify, or delete contacts and contact groups.

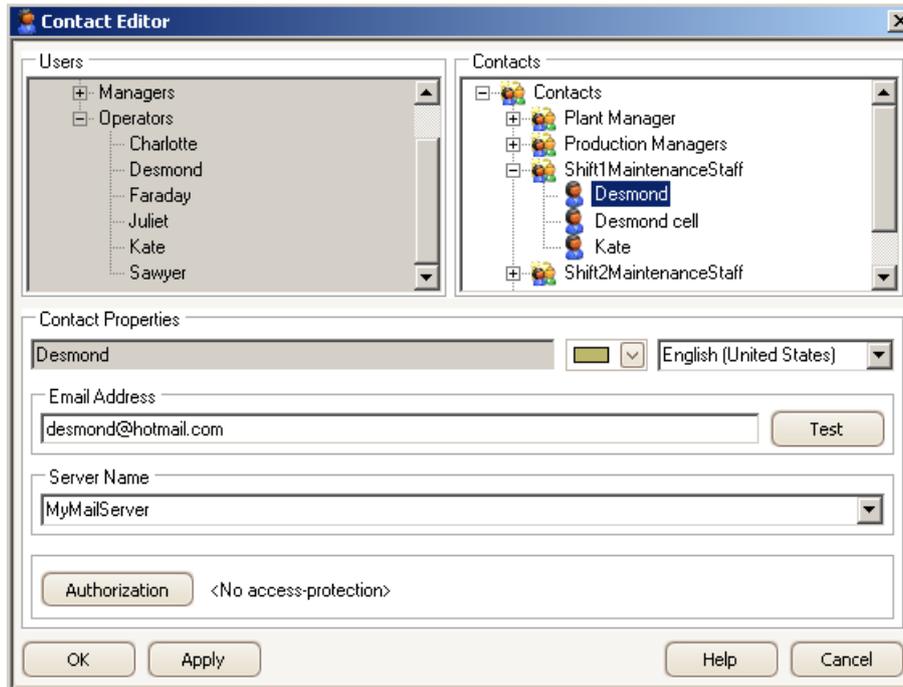
Procedure

You can open the Contact Editor in the following ways:

- From the toolbar, click .
- From the menu bar, select "Edit > Contacts".
- Click the "Add New" button in the contacts area of the Notification Schedule Editor.
- Right-click in the contacts area of the Notification Schedule Editor and choose "New".

Results

When the Contact Editor is opened, the users configured in the WinCC User Administrator and the configured contact groups and contacts display. Selecting a contact group or contact displays its configuration.



6.3.6 Opening the Notification Editor

Introduction

The Notification Editor is used to create, rename, modify, or delete notifications.

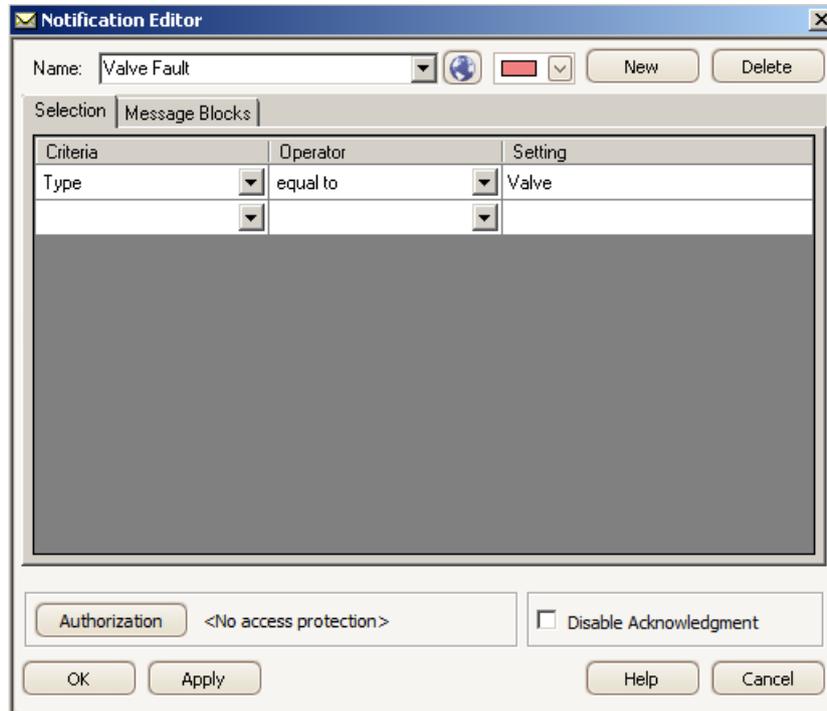
Procedure

You can open the Notification Editor in the following ways:

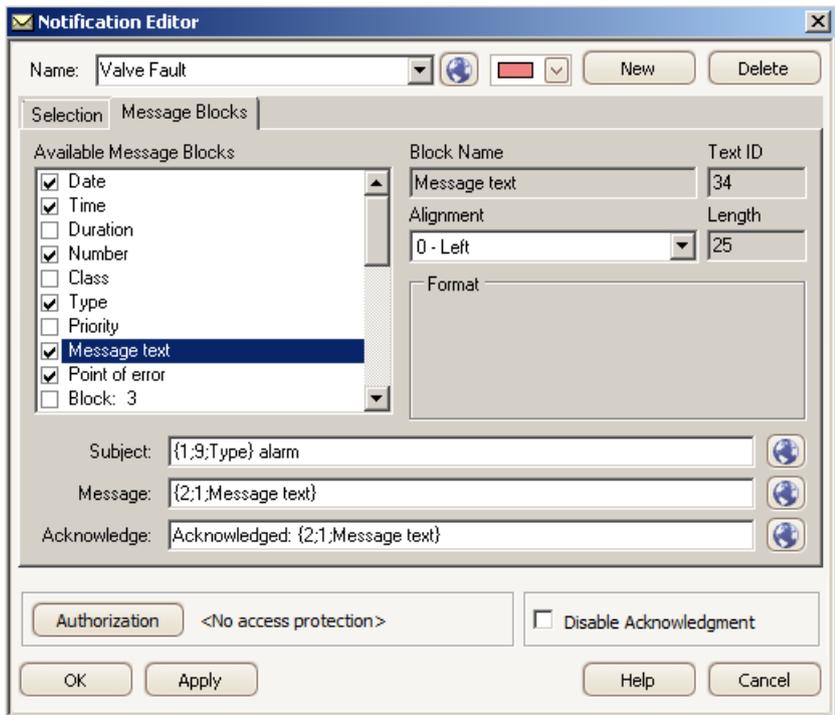
- From the toolbar, click .
- From the menu bar, select "Edit > Notifications".
- Click the "Add New" button in the notifications area of the Notification Schedule Editor.
- Right-click in the notifications area of the Notification Schedule Editor and choose "New".

Results

When the Notification Editor is opened, a default unconfigured notification displays. Selecting a configured notification displays its configuration. One tab shows the selection filter criteria.



Another tab shows the content structure for the message information to display in the notification email and response email.



6.3.7 Opening the Calendar List Editor

Introduction

The Calendar List Editor is used to create, rename, and delete calendars. This editor lets you choose a color to identify a calendar and its associated schedules. Depending on the installed Calendar Options, a schedule can be an action schedule or notification schedule.

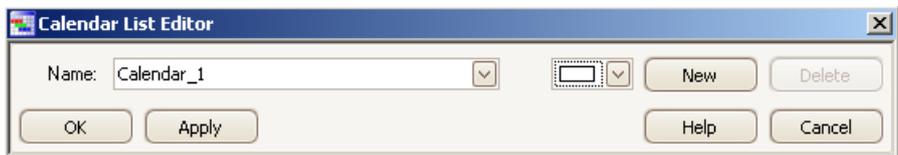
Procedure

You can open the Calendar List Editor in the following ways:

- From the toolbar, click .
- From the menu bar, select "Edit > Calendars".

Results

The Calendar List Editor opens with a default calendar and color displaying.



6.3.8 Changing the configuration language

Introduction

You can change the configuration language in which a calendar displays by selecting a language from a list. The languages available for Calendar Options are those installed with WinCC except ASIAN languages.

Procedure

1. In the Calendar Options Editor, click "Tools > Language".
2. Select the language from the list and click "OK".
The Calendar Options Editor and WinCC configuration language change to the selected language.

6.3.9 Field descriptions

6.3.9.1 Calendar List Editor

In the Calendar List Editor, you create, rename, and delete calendars. You can specify a color to quickly identify a calendar and its associated schedules. Depending on the installed Calendar Options, a schedule can be an action schedule or notification schedule.

Field	Description
Name	A unique, descriptive name for the calendar that represents a grouping of schedules. Selecting the arrow next to this field displays a list of calendar names created in the opened WinCC project. You create a calendar by clicking "New", entering a unique name in this field, and clicking "OK".
Locale button	Opens the Locale Editor so you can specify translated text to represent the calendar name. Calendars not configured with translated text will display in the language configured for the Calendar Option. This button displays only for configured calendars. Clicking "Apply" while creating a calendar saves the name and displays this button.
Color picker	Opens the color palette so you can select a color to associate with a calendar name and its schedules.
New	Clears the visible configuration in the editor and displays a default calendar name.
Delete	Deletes the selected calendar name and its associated schedules permanently. You must confirm a calendar deletion.
OK	Saves the configuration and closes the editor.
Apply	Saves the configuration and keeps the editor open.
Cancel	Exits the editor without saving any modifications.

6.3.9.2 Notification Schedule Editor

In the Notification Schedule Editor, you define the general properties for a notification schedule.

Field	Description
Name	A descriptive name for the schedule. When this editor is opened initially, a default name displays. Although you can keep the default name, it is recommended that you rename the schedule for easy recognition.
Description	Information that describes the schedule.
Start Time	The date and time you want the schedule to start. You can enter the date and time or use the arrows. Clicking the date arrow opens a pop-up calendar so you can choose the date.
End Time	The date and time you want the schedule to end. You can enter the date and time or use the arrows. Clicking the date arrow opens a pop-up calendar so you can choose the date.
Contacts	A list of contacts or contact groups with an "Escalation" time to receive notifications between the start and end time. After the schedule is saved, the contacts are sorted by the "Escalation" time.
Escalation	Defines the delay time in minutes to wait until an email is sent to the contact. Clicking the "Escalation" arrow lets you set the minutes that an alarm must remain unacknowledged before the contact is notified. A "0" value indicates the notifications are sent immediately.
Notifications	A list of notifications that identifies a set of alarms or other WinCC messages to send when an alarm occurs.
Select	"Contacts" area: Opens the "Contacts" list that contains configured contacts so you can quickly choose the contacts for the schedule. "Notifications" area: Opens the "Notifications" list that contains configured notifications so you can quickly choose the notifications for the schedule.
Add New	"Contacts" area: Opens the Contact Editor so you can configure a new contact to attach to the schedule. After the contact is created, it displays in the "Contacts" area of the Notification Schedule Editor. The contact is also added to the "Contacts" list and the "Resources" window. "Notifications" area: Opens the Notification Editor so you can configure a new notification to attach to the schedule. After the notification is created, it displays in the "Notifications" area of the Notification Schedule Editor. The notification is also added to the "Notifications" list and the "Resources" window. This button is not visible in Runtime.
Calendar	Selects the calendars where the schedule is to display. Clicking the arrow lets you choose one or more configured calendars.
Locale button	Opens the Locale Editor so you can specify translated text to represent the schedule name. Names not configured with translated text will display in the language configured for the Calendar Option. This button displays only for configured schedules. Clicking "Apply" while creating a schedule saves the name and displays this button. This button is not visible in Runtime.
Recurrence	Opens the "Recurrence" dialog so you can set the frequency and time period to repeat the schedule.
New	Clears the visible configuration in the editor and displays the next available default schedule name.

Field	Description
Delete	Deletes the schedule from the selected calendar. If recurrence is configured, you can delete the schedule on a specific date and time, without deleting the series.
OK	Saves the configuration and closes the editor.
Apply	Saves the configuration and keeps the editor open.
Cancel	Exits the editor without saving any modifications.

6.3.9.3 "Recurrence" dialog

In the "Recurrence" dialog, you configure a schedule to repeat many times, so you will not need to create the schedule again and again. Depending on the installed Calendar Options, a schedule can be an action schedule or notification schedule.

Field	Description
Recurrence time	The time period that the schedule is to start and end. When you select the start and end times, the duration is calculated automatically. If you change the duration, the end time changes to reflect the selected duration.
Recurrence pattern	Defines the frequency that the schedule is to repeat. The options change based on the selected frequency: <ul style="list-style-type: none"> • "Minutely" • "Hourly" • "Daily" • "Weekly" • "Monthly" • "Yearly" Example: To set a schedule to repeat every Friday, you would select "Weekly" and "Friday" and set "Recur every" to "1".
Range of recurrence	Defines the date range that the recurrence pattern is to start and end. The end date has the following options: <ul style="list-style-type: none"> • "No end date" • "End after": Specifies the number of occurrences. After you enter the number of occurrences, the "End by" date changes so you can see the end date of the range. • "End by": Specifies a date. After you select a date from the pop-up calendar, the schedule's end time is added automatically.
Remove Recurrence	Deletes the recurrence configuration from the schedule. All occurrences of the schedule except the initial configured instance are removed.
OK	Saves the configuration and closes the dialog.
Cancel	Exits the dialog without saving any modifications.

6.3.9.4 Contact Editor

In the Contact Editor, you create, rename, modify, and delete contacts and contact groups.

Field	Description
Users	Displays the list of WinCC users and groups defined in the User Administrator. You can quickly access the User Administrator to create more users by right-clicking in this area and choosing "User Administration". Users cannot be created during Runtime. Selecting a user in this area highlights all contacts associated with the user.
Contacts	Contact and contact group names associated with the WinCC users. A contact must be associated with a group. Create a group by right-clicking "Contacts" and selecting "Add Group". Create contacts by dragging users to a group name. Right-clicking a contact lets you delete its configuration, delete it from a group, or rename it.
Contact Properties	Displays the name and configuration of the selected contact or contact group. The properties that can be configured depend on whether a contact or contact group is selected.
Color picker	Opens the color palette so you can select a color to identify the contact or contact group.
Locale button	Opens the Locale Editor so you can specify translated text to represent the contact group name. Names not configured with translated text will display in the language configured for the Calendar Option. This button displays only for configured contact groups. Clicking "Apply" while creating a contact group saves the name and displays this button. This button is not visible in Runtime.
Language selector	Language in which the email displays for the contact. The languages installed in WinCC are available.
Email Address	Email address of the contact to receive notification email from the Event Notifier. This must not be the same email address configured for the communication service.
Test	Sends a test email to the contact's configured email account.
Server Name	Name of the server that contains the contact's communication service information. The server name is defined in the Communication Service Editor.
Authorization	Opens a list of authorizations so you can set a user restriction on the use of the contact. The selected authorization displays next to the "Authorization" button. The default authorization is "<No access-protection>".
OK	Saves the configuration and closes the editor.
Apply	Saves the configuration and keeps the editor open.
Cancel	Exits the editor without saving any modifications.

6.3.9.5 Notification Editor

In the Notification Editor, you define the general properties for a notification.

Field	Description
Name	A unique, descriptive name to identify a notification that can be associated with a notification schedule. When this editor is opened initially, a default name displays. Although you can keep the default name, it is recommended that you rename the notification for easy recognition.
Locale button	Opens the Locale Editor so you can specify translated text to represent the notification name. A "Locale" button also exists for the "Subject", "Message", and "Acknowledge" fields. Names and content structure not configured with translated text will display in the language configured for the Calendar Option. This button displays only for configured notifications. Clicking "Apply" while creating a notification saves the name and displays this button.
Color picker	Opens the color palette so you can select a color to identify this notification.
Selection	Defines the filter criteria used to match the notification with the alarm messages during Runtime. To configure a selection criterion, click the "Criteria" arrow and choose an available message block. Click the "Operator" arrow and choose a Boolean operator, such as "equal to". Depending on the selected message block, enter text or a value, or select an option in the "Setting" column.
Message Blocks	Displays the "Available Message Blocks" that can be used to define the content of the subject and body in the notification email and response email. The message blocks are configured in WinCC Alarm Logging. Selecting a message block displays its configuration. When defining the content for email, you can enter text and drag available message blocks into the "Subject", "Message", and "Acknowledge" fields.
Subject	Content structure for the subject of the notification email and response email. The same subject is used for the response email and its related notification email. Additional information about "Subject" is in the creating a notification procedure.
Message	Content structure for the body of the notification email. This field can be blank depending on the recipient.
Acknowledge	Content structure for the body of the response email.
Authorization	Opens a list of authorizations so you can set a user restriction on the use of the notification. The selected authorization displays next to the "Authorization" button. The default authorization is "<No access-protection>".
Disable Acknowledgment	Prevents contacts from acknowledging the alarm condition in this notification via email. With this option selected, the contacts receive a notification email but cannot send an acknowledgment response. This is useful when an alarm is a high-priority critical alarm and only an authorized operator can acknowledge the alarm. If email acknowledgment was allowed, the alarm acknowledgment could be spoofed.
New	Clears the visible configuration in the editor and displays the next available default notification name.
Delete	Deletes the selected notification. If the notification is used in a schedule, a message displays stating you cannot delete the notification.

6.3 Working with Event Notifier

Field	Description
OK	Saves the configuration and closes the editor.
Apply	Saves the configuration and keeps the editor open.
Cancel	Exits the editor without saving any modifications.

6.3.9.6 Locale Editor

In the Locale Editor, you specify text to represent the translated name for a schedule or resource. Depending on the installed Calendar Options, a schedule can be an action schedule or notification schedule. A resource can be an action, notification, contact group, or calendar.

Field	Description
Language	Displays a list of languages installed in WinCC.
Name	The translated text to represent the selected schedule or resource name for a particular language. The translated names will display in Runtime. Names not configured with translated text will display in the language configured for the Calendar Option.
OK	Saves the configuration and closes the editor.
Cancel	Exits the editor without saving any modifications.

6.3.9.7 Communication Service Editor

In the Communication Service Editor, you define the general properties for an email server or communication service. Obtain the email account information from your IT department or email provider.

Field	Description
Name	Descriptive name to identify the communication service
Email Address	Email address for the mailbox that the Event Notifier will use to send and receive email This must not be the same as the email address of the contacts.
Type	Identifies the protocol type for the email server. <ul style="list-style-type: none"> "SMTP/POP3": Default protocol type "Test Mailer": Demo purpose Other types display after they are installed with a third-party WinCC mail service add-on.
Poll Rate	Defines the frequency in seconds to check the email server for new messages. (default = 30 seconds)
Advanced	Opens a third-party WinCC mail service add-on for configuring a different mail protocol. This button is visible only when the add-on is installed.
Server	Defines the server name or IP address for the "Send" (SMTP) and "Receive" (POP) email servers.
Port	Port number for the "Send" (SMTP) and "Receive" (POP) email servers.

Field	Description
SSL	Specifies whether the email server requires authentication for SSL. A secure version of SSL is recommended for better protection from sniffing and from spoofed acknowledgment responses. The user name and password will be encrypted before getting passed to the email server.
Login	Defines the email address or user name that the Event Notifier will use to log on to the email server
Password	Defines the password for the "Login" account on the email server
Add	Clears the visible configuration in the editor and displays the next available default name.
Remove	Deletes the selected communication service from the list.
Test	Opens the "Test Email" dialog for sending a test email to the configured communication service.
Save	Saves the configuration and keeps the editor open. The configured communication service displays in the list.
Close	Saves the configuration and closes the editor.

6.4 Configuration

6.4.1 Configuring communication services

6.4.1.1 Configuring a communication service

Introduction

The Communication Service Editor is used to define the email account that WinCC uses to send notifications and receive acknowledgments. Configuring the notification email account involves defining the email address and how to communicate with the email provider for this email account.

Typical applications have one communication service defined during initial project setup. In most cases, the communication service is a dedicated email address defined on the company's corporate email server. However, you can use a dedicated email address on any SMTP/POP3 email provider, e.g. Gmail, Hotmail.

Note

- Obtain the email account information from your IT department or email provider.
 - Observe the general security information stated in the email guidelines (Page 120).
-

Creating a communication service

1. Expand "Calendar Options" and "Event Notifier" in WinCC Explorer. Double-click "Communication Service" to open the Communication Service Editor.
2. Click "Add".
3. Enter the following settings to configure a communication service. Example configurations are available in this chapter.

Field	Description
Name	Descriptive name to identify your communication service
Email Address	Email address for the mailbox that the Event Notifier will use to send and receive email This must not be the same as the email address of the contacts.
Type	Protocol type for the email server. Use the default setting "SMTP/POP3" unless another protocol is required. For another mail protocol to be available, it must be configured. Click "Advanced" and use a third-party WinCC mail service add-on to configure the protocol. The "Advanced" button is visible only when the add-on is installed.
Poll Rate	The frequency in seconds to check the email server for new messages (default = 30 seconds)
Server	Server name or IP address for the "Send" (SMTP) and "Receive" (POP) email servers
Port	Port number for the "Send" (SMTP) and "Receive" (POP) email servers
SSL	Specifies whether the email server requires authentication for SSL A secure version of SSL is recommended for better protection from sniffing and from spoofed acknowledgment responses.
Login	Email address or user name that the Event Notifier will use to log on to the email server
Password	Password for the "Login" account on the email server

4. Click "Save" to save the configuration. Click "Close" to exit.
The configuration is added to the list of configured communication services.

Modifying a communication service

1. Select the communication service name in the list.
2. Make the changes and then click "Save".

Deleting a communication service

1. Select the communication service name in the list.
2. Click "Remove" and then click "Save".

6.4.1.2 Email server configuration

Reply mailbox

The Event Notifier removes response email from the email servers as it processes the email.

Observe the following requirements:

- Each independent WinCC server running the Event Notifier Server must have a separate reply mailbox. Redundant systems would use the same mailbox.
- If email software (such as Microsoft Outlook, Outlook Express, Windows Live Mail) is used to monitor the reply mailbox, select the "Leave messages on server" check box on the "Advanced" tab of the account properties.

For POP3 email servers, the Event Notifier uses "User/Password" authentication as the default setting. It can also use APOP or NTLM authentication, if available on the email server. If "User/Password" authentication fails, the Event Notifier will attempt to login using APOP and/or NTLM where available.

Message size limit

Message size limits provide a method to control mailbox sizes, guarantee service availability, and protect from potential denial-of-service attacks.

To control the mailbox size, configure a message size limit on the received messages. This way the email server rejects messages greater than a specified number of bytes. The location to configure the message size limit is different on the email servers. Refer to your email server's documentation for more information.

6.4.1.3 Example of configuring Microsoft Exchange

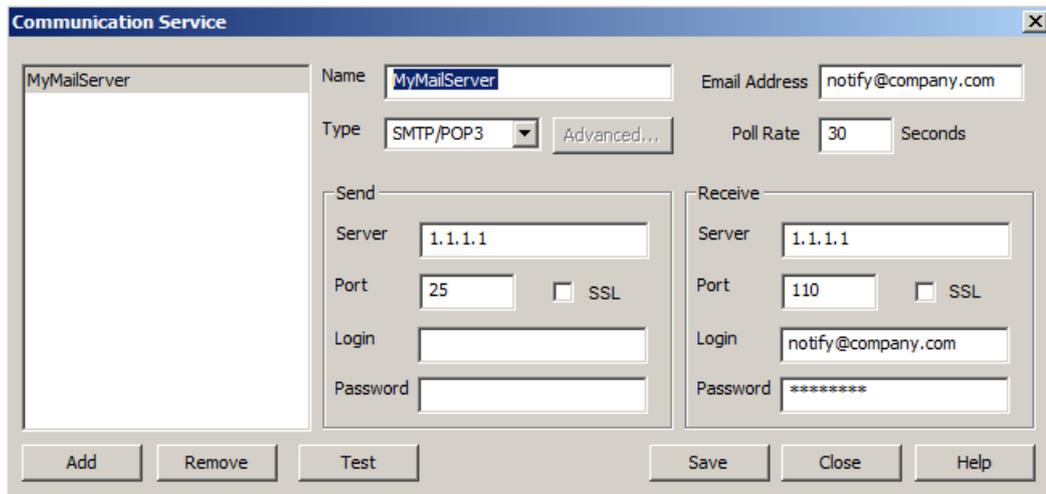
Configuring a communication service

This example shows the settings in the Communication Service Editor when the Event Notifier uses a Microsoft Exchange account.

Note

Obtain the email account information from your IT department.

6.4 Configuration

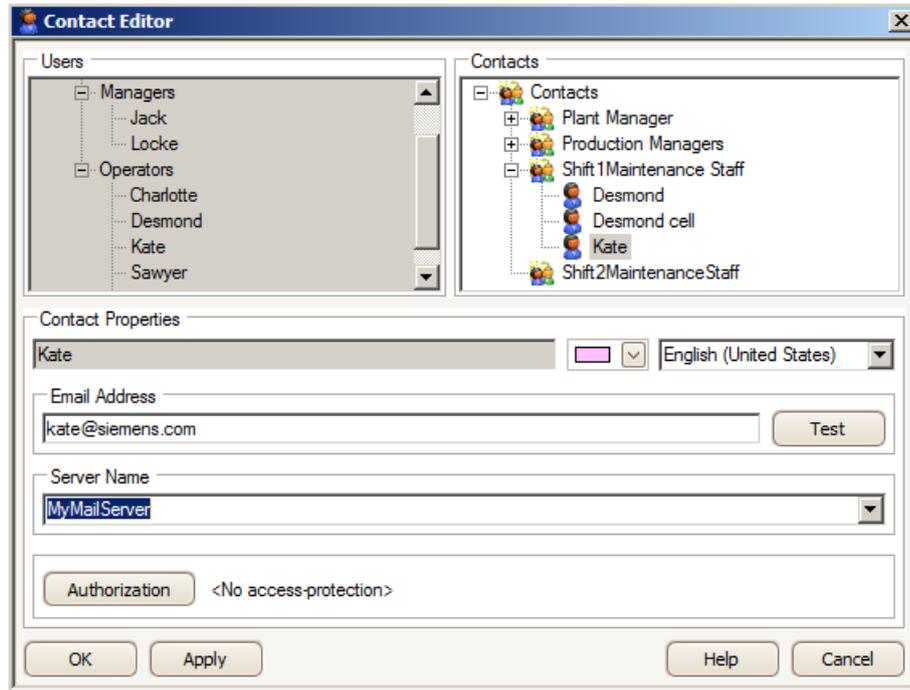


Field	Value ¹⁾
Name	<i>MyMailServer</i>
Email Address ²⁾	<i>notify@company.com</i>
Type	SMTP/POP3
Poll Rate	30
Server ³⁾	"Send" (SMTP): <i>1.1.1.1</i> "Receive" (POP): <i>1.1.1.1</i>
SSL ⁴⁾	
Port	"Send" (SMTP): 25 "Receive" (POP): 110
Login ⁵⁾	<i>notify@company.com</i>
Password	<i>LoginPassword</i>

- 1) A value in italics indicates user-defined information.
- 2) Event Notifier mailbox. This must not be the same as the email address of the contacts.
- 3) Server name or IP address
- 4) Authentication required when selected. Setting depends on your IT department's configuration.
- 5) Email address or user name. This may be different than the mailbox's "Email Address". Setting depends on the name provided by your IT department. Login information for "Send" is not required when using the same server to send and receive email.

Configuration for contacts

This example shows the settings in the Contact Editor when the communication service is configured for a Microsoft Exchange account.



Field	Value ¹⁾
Email Address ²⁾	<i>kate@siemens.com</i>
Server Name	<i>MyMailServer</i>

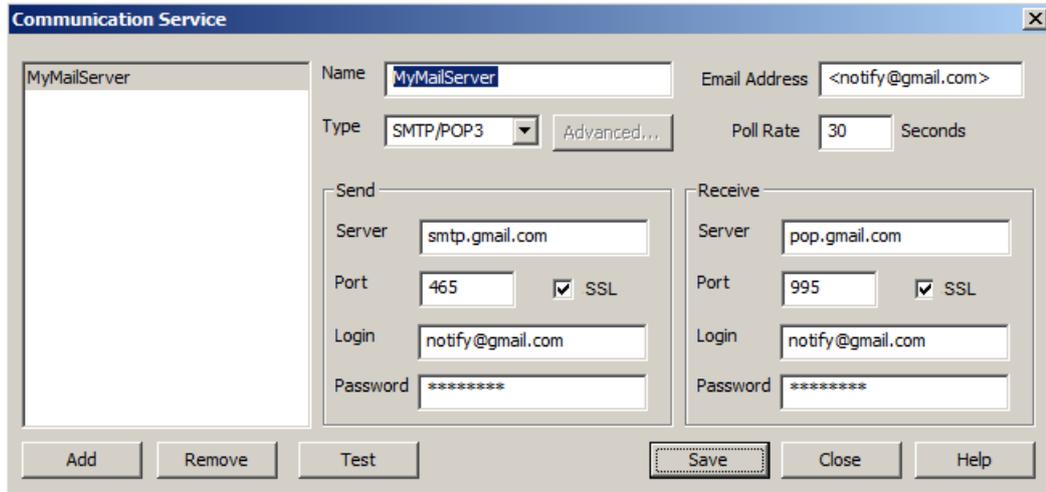
¹⁾ A value in italics indicates user-defined information.

²⁾ Email address of the contact to receive notification email from the Event Notifier. This must not be the same email address configured for the communication service.

6.4.1.4 Example of configuring Gmail

Configuring a communication service

This example shows the settings in the Communication Service Editor when the Event Notifier uses a Gmail account.

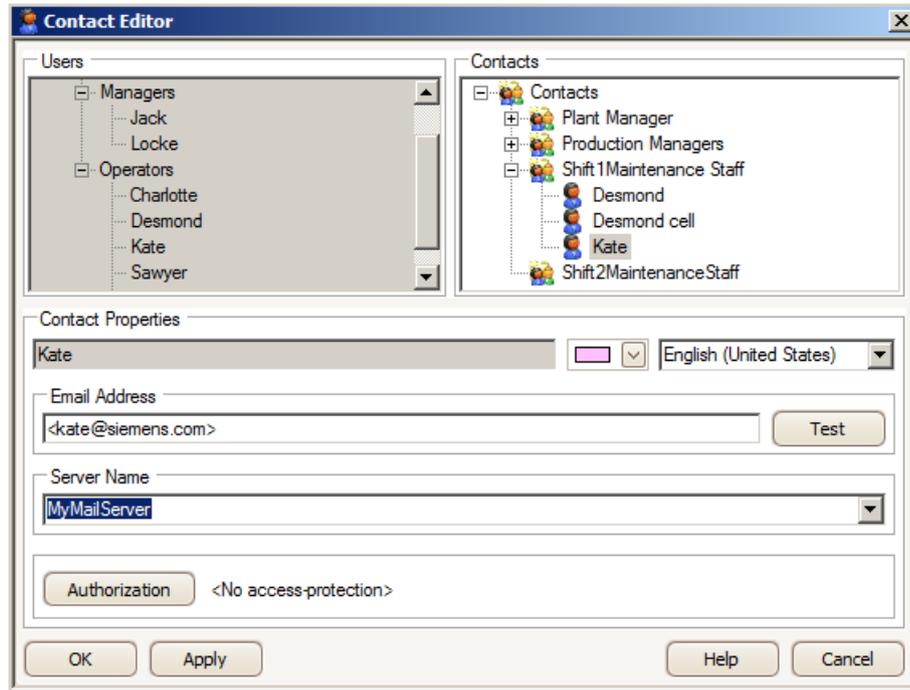


Field	Value ¹⁾
Name	<i>MyMailServer</i>
Email Address ²⁾	<notify@gmail.com>
Type	SMTP/POP3
Poll Rate	30
Server	"Send" (SMTP): smtp.gmail.com "Receive" (POP): pop.gmail.com
SSL ³⁾	Check box for "Send" and "Receive" selected
Port	"Send" (SMTP): 465 "Receive" (POP): 995
Login	notify@gmail.com
Password	<i>LoginPassword</i>

- 1) A value in italics indicates user-defined information.
- 2) Event Notifier mailbox, with the email address placed between "<>" symbols. This must not be the same as the email address of the contacts.
- 3) Authentication required

Configuration for contacts

This example shows the settings in the Contact Editor when the communication service is configured for a Gmail account.



Field	Value ¹⁾
Email Address ²⁾	<i><kate@siemens.com></i>
Server Name	<i>MyMailServer</i>

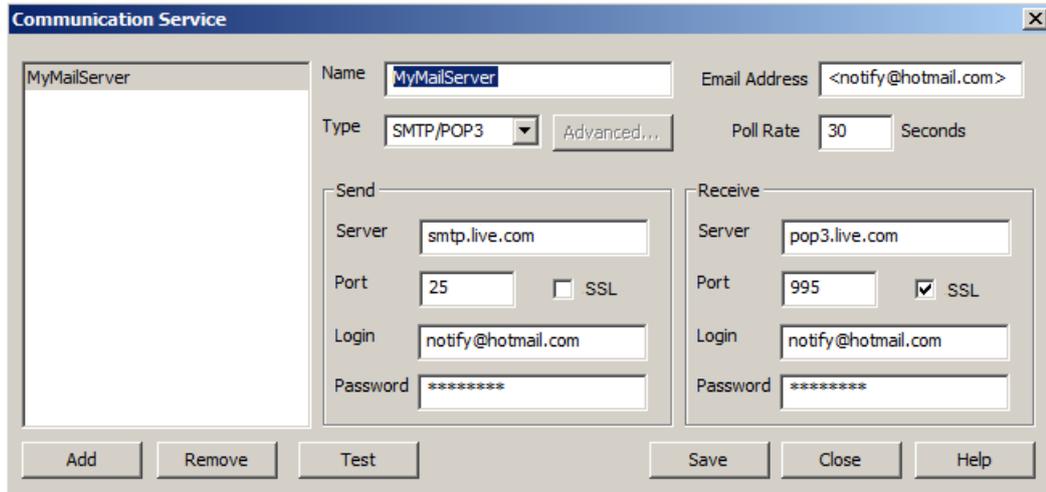
¹⁾ A value in italics indicates user-defined information.

²⁾ Email address of the contact to receive notification email from the Event Notifier. The email address must be placed between "<>" symbols. This must not be the same email address configured for the communication service.

6.4.1.5 Example of configuring Hotmail

Configuring a communication service

This example shows the settings in the Communication Service Editor when the Event Notifier uses a Hotmail account.

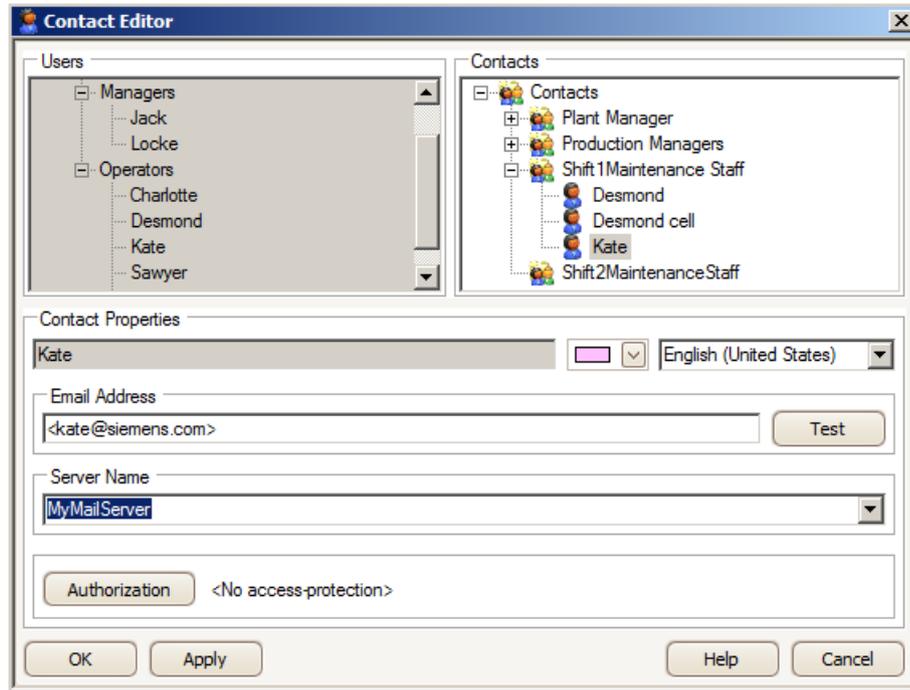


Field	Value ¹⁾
Name	<i>MyMailServer</i>
Email Address ²⁾	<notify@hotmail.com>
Type	SMTP/POP3
Poll Rate	30
Server	"Send" (SMTP): smtp.live.com "Receive" (POP): pop3.live.com
SSL ³⁾	Check box for "Receive" selected
Port	"Send" (SMTP): 25 "Receive" (POP): 995
Login	notify@hotmail.com
Password	<i>LoginPassword</i>

- 1) A value in italics indicates user-defined information.
- 2) Event Notifier mailbox, with the email address placed between "<>" symbols. This must not be the same as the email address of the contacts.
- 3) Authentication required when selected

Configuration for contacts

This example shows the settings in the Contact Editor when the communication service is configured for a Hotmail account.



Field	Value ¹⁾
Email Address ²⁾	<i><kate@siemens.com></i>
Server Name	<i>MyMailServer</i>

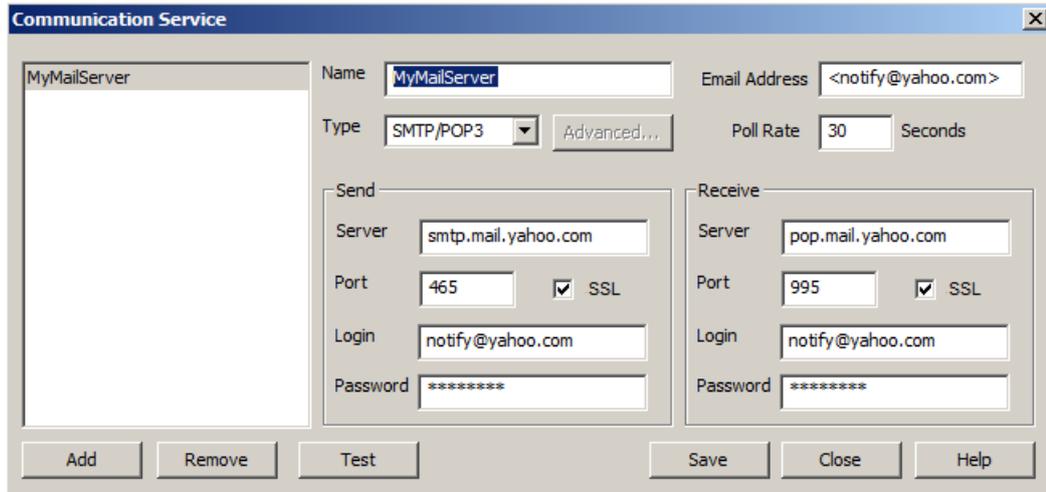
¹⁾ A value in italics indicates user-defined information.

²⁾ Email address of the contact to receive notification email from the Event Notifier. The email address must be placed between "<>" symbols. This must not be the same email address configured for the communication service.

6.4.1.6 Example of configuring Yahoo

Configuring a communication service

This example shows the settings in the Communication Service Editor when the Event Notifier uses a Yahoo account.



Field	Value ¹⁾
Name	<i>MyMailServer</i>
Email Address ²⁾	< <i>notify@yahoo.com</i> >
Type	SMTP/POP3
Poll Rate	30
Server	"Send" (SMTP): smtp.mail.yahoo.com "Receive" (POP): pop.mail.yahoo.com
SSL ³⁾	Check box for "Send" and "Receive" selected
Port	"Send" (SMTP): 465 "Receive" (POP): 995
Login	<i>notify@yahoo.com</i>
Password	<i>LoginPassword</i>

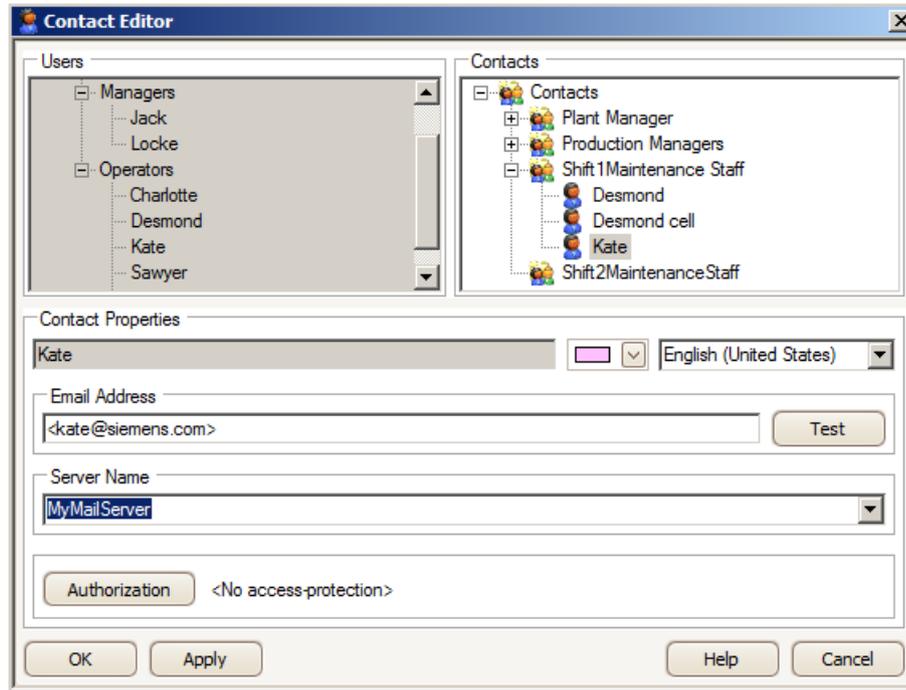
- 1) A value in italics indicates user-defined information.
- 2) Event Notifier mailbox, with the email address placed between "<>" symbols. This must not be the same as the email address of the contacts.
- 3) Authentication required

Note

Make sure that the "Send" and "Receive" SSL checkbox is selected while configuring a Yahoo account in the Communication Service Editor.

Configuration for contacts

This example shows the settings in the Contact Editor when the communication service is configured for a Yahoo account.



Field	Value ¹⁾
Email Address ²⁾	<kate@siemens.com>
Server Name	MyMailServer

¹⁾ A value in italics indicates user-defined information.

²⁾ Email address of the contact to receive notification email from the Event Notifier. The email address must be placed between "<>" symbols. This must not be the same email address configured for the communication service.

6.4.2 Configuring notification schedules

6.4.2.1 Creating a calendar

Introduction

You create calendars to allow subsets of schedules to display in Runtime. The Calendar Options contain a default calendar. The Calendar List Editor lets you create additional calendars and manage the list of calendars.

When creating a calendar, you choose a color for easy identification of the calendar and its schedules.

6.4 Configuration

Procedure

1. Select "Edit > Calendars" to open the Calendar List Editor.
2. Click "New".
3. Replace the default name with a unique name for the calendar.
4. Click the color picker arrow and select a color to associate with this calendar and its schedules.
5. To specify translated text (Page 162), click "Apply" and then click the "Locale" button. Enter the translated text for the calendar name in each language and click "OK".
6. Click "OK".
The calendar is added and sorted alphabetically in the "Resources" window. The calendar can be selected in the schedule editor.

6.4.2.2 Creating a notification schedule

Introduction

You create notification schedules to set the time to email WinCC users when alarms occur. You create the schedules using the Notification Schedule Editor by selecting contacts and notifications from preconfigured lists or by configuring new contacts and notifications.

A schedule designates contacts to receive the selected notifications between the specified start and end time. Each contact is assigned an escalation time that indicates the minutes an alarm must remain unacknowledged before the contact is notified.

Procedure

1. Double-click a date or time slot in the data window to open the Notification Schedule Editor.

Note

If other schedule types are available, the notification schedule preference must be selected as the default schedule type for this editor to open when double-clicking a date or time slot. To set the preference, click "View > Preferences > Default Schedule Type > Notification".

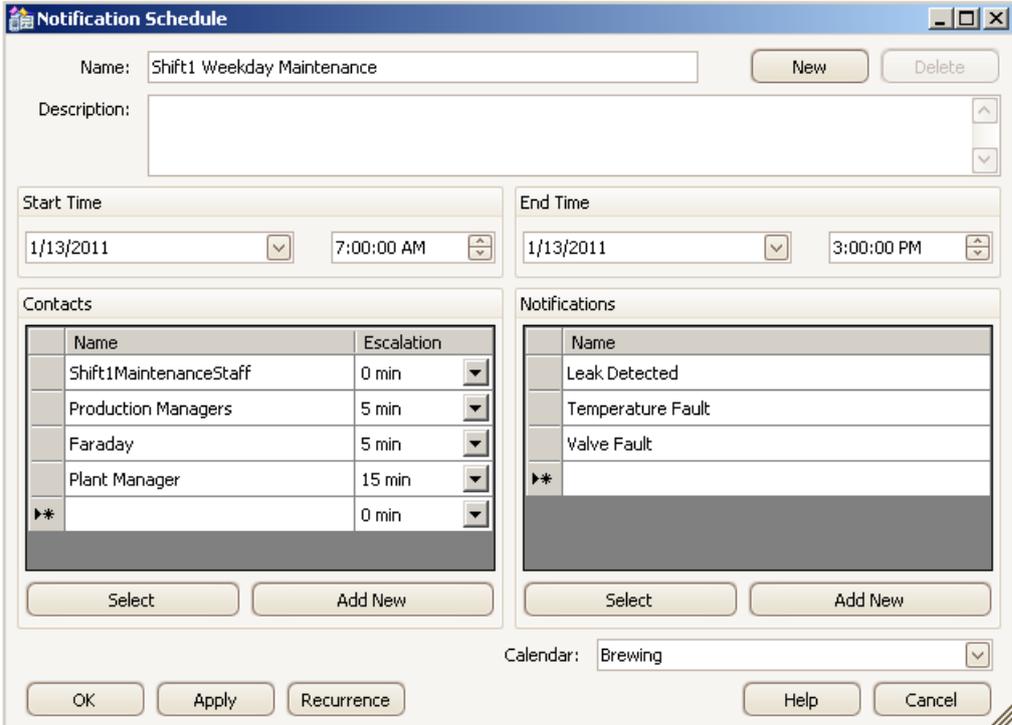
2. In the "Name" field, enter a name for the notification schedule.
3. Optionally, enter information to describe the schedule in the "Description" box.
4. Set the "Start Time" to activate and the "End Time" to deactivate the schedule.
5. Under "Contacts", choose the contacts for this schedule:
 - To choose from a list of preconfigured contacts and contact groups, click "Select". Select the contacts and click "OK".
 - To configure a new contact, click "Add New". The Contact Editor opens for you to configure a contact or contact group (Page 154) to attach to the schedule.
 - For each contact, set an "Escalation" time in minutes that an alarm must remain unacknowledged before the contact is notified. A "0" indicates the contact is notified immediately.

6. Under "Notifications", choose the notifications to send to the selected contacts:
 - To choose from a list of preconfigured notifications, click "Select". Select the notifications and click "OK".
 - To configure a new notification, click "Add New". The Notification Editor opens for you to configure a notification (Page 157) to attach to the schedule.
7. Click the "Calendar" arrow and select the calendars where the schedule is to display. Click outside the list.

Note

Clicking  closes the list without saving the selections made.

If you do not select a calendar, the schedule is associated with the "Default" calendar.



Notification Schedule

Name: Shift1 Weekday Maintenance New Delete

Description:

Start Time: 1/13/2011 7:00:00 AM

End Time: 1/13/2011 3:00:00 PM

Contacts	
Name	Escalation
Shift1MaintenanceStaff	0 min
Production Managers	5 min
Faraday	5 min
Plant Manager	15 min
▶*	0 min

Notifications	
Name	
Leak Detected	
Temperature Fault	
Valve Fault	
▶*	

Calendar: Brewing

OK Apply Recurrence Help Cancel

8. To configure the schedule to repeat, click "Recurrence". Set the desired recurrence pattern and time (Page 160) and click "OK".
9. To specify translated text (Page 162), click "Apply" and then click the "Locale" button. Enter the translated text for the schedule name in each language and click "OK".
10. After you finish configuring the schedule, click "OK".

Note

Connection to SMTP

The generated Alarm notifications will be lost if the connection to the SMTP server is lost.

6.4 Configuration

Results

The notification schedule displays in the selected calendars at the specified times. The color of a schedule is the same as its associated calendar. The way the schedule color (Page 181) displays depends on the selection of multiple calendars in the "Resources" window and a multi-resource view.

An arrow displays in a date or time slot when it contains schedules that are not visible. Clicking the arrow displays the additional schedules in the "Agenda" list.

6.4.2.3 Creating contacts and contact groups

Introduction

You create contacts to receive the notifications generated when an alarm occurs. A contact is a WinCC user with a specified email address. Only users created in the WinCC User Administrator can be a contact. Each contact must have a communication service through which messages are sent.

A contact can be in multiple contact groups. Contact associations (Page 156) are created when a contact is used in multiple groups.

To prevent unauthorized use of a contact in Runtime, you can set a user authorization on the contact.

After a contact is configured, it appears in the "Contacts" list so that you can use the contact again for creating schedules quickly.

Creating a contact group

1. Select "Edit > Contacts" to open the Contact Editor.

Note

While creating or modifying a schedule, you can click "Add New" to open the Contact Editor and configure a new contact to attach to the schedule.

2. Under "Contacts", right-click "Contacts" and choose "Add Group".
3. Replace the default name with a descriptive name and press <Enter>.
4. Click the color picker arrow and select a color from the color palette to associate with this contact group.
5. To specify translated text (Page 162), click "Apply" and then click the "Locale" button. Enter the translated text for the contact group name in each language and click "OK".
6. Save the configuration.

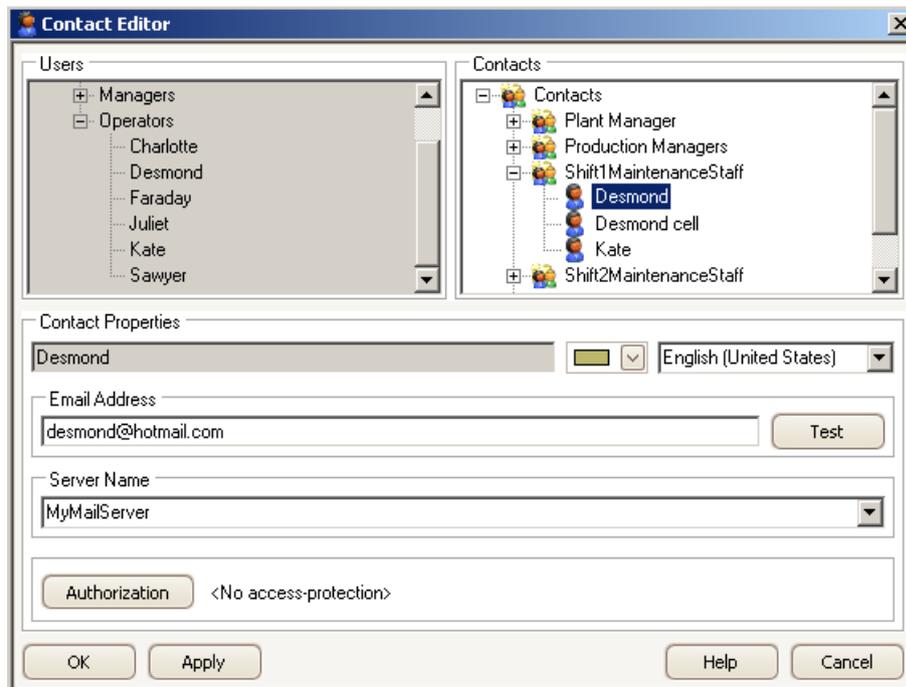
Creating a contact

1. Open the Contact Editor.
2. Under "Users", select a WinCC user name and drag it to a contact group. Optionally, right-click and drag the user to a contact group so you can create an alias name for the contact.

Note

To create additional WinCC users and groups, right-click in the "Users" area and select "User Administration". Information about user groups and administration is in the WinCC Information System under "Working with WinCC > Structure of the User Administration".

3. Expand the group name and select the contact, so that its name displays under "Contact Properties".
4. Click the color picker arrow and select a color from the color palette to associate with this contact.
5. Click the language selector arrow and choose which language to display email for the contact. The languages configured with the WinCC project display.
6. Enter the email address for the contact. Click the "Server Name" arrow and select the configured communication service (Page 141) for your email server.

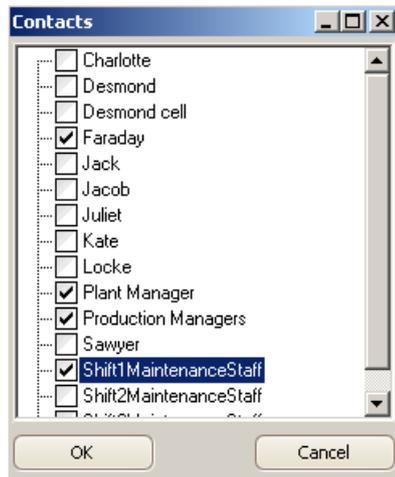


7. To permit only authorized users to create schedules using this contact, click "Authorization". Choose an authorization that is defined in the User Administrator and click "OK".
8. Save the configuration.

6.4 Configuration

Results

The new contact and contact group are added to the "Contacts" list for use in configuring schedules. Both are added and sorted alphabetically in the "Resources" window.



If the contact was created while configuring a schedule, the contact is added to the "Contacts" area in the Notification Schedule Editor.

6.4.2.4 Creating contact associations

Introduction

You create contact associations when a contact is used in multiple groups. Selecting the WinCC user lets you see all contacts and alias names created for this user.

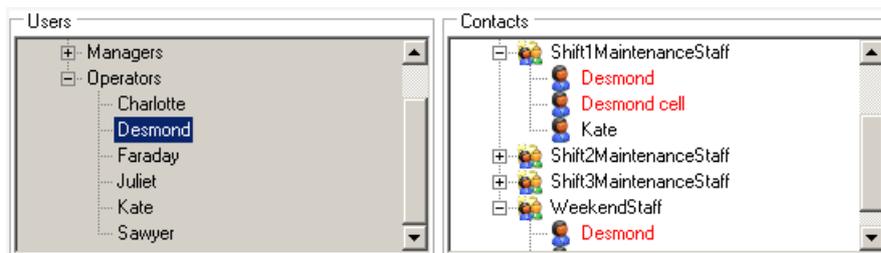
Procedure

1. Select "Edit > Contacts" to open the Contact Editor.
2. Choose either of these ways to create a contact association:
 - Drag a WinCC user to a contact group and then drag this user to another contact group. After configuring one of the contacts, its configuration is applied to the other occurrences of the contact.
 - Click a contact in a group and drag it to another group. The contact with its configuration is copied to the other group.

Note

To move a contact to another group, right-click the contact and drag it to another group.

3. Select the user to see all contacts and alias names associated with this user. The contact groups expand to display all associated contacts in red.



6.4.2.5 Creating a notification

Introduction

You create a notification to specify a subset of the configured messages. Each notification contains message blocks and selection filter criteria that determine which message information to send when an alarm occurs. Notifications are used in schedules to indicate which contacts are to receive the email.

To prevent unauthorized use of a notification in Runtime, you can set a user authorization on the notification.

After a notification is configured, it appears in the "Notifications" list so that you can use the notification again for creating schedules quickly.

Character length of the "Subject"

The Event Notifier stores a 34 character unique ID in the "Subject" line of notification email. This ID is necessary in the "Subject" line when contacts reply to email. The Event Notifier Server uses this ID to acknowledge the correct alarm.

Because some devices have a short subject length, consider the additional length required for the ID when configuring the "Subject" field of a notification. The character length is determined by the maximum width of the text display minus 34.

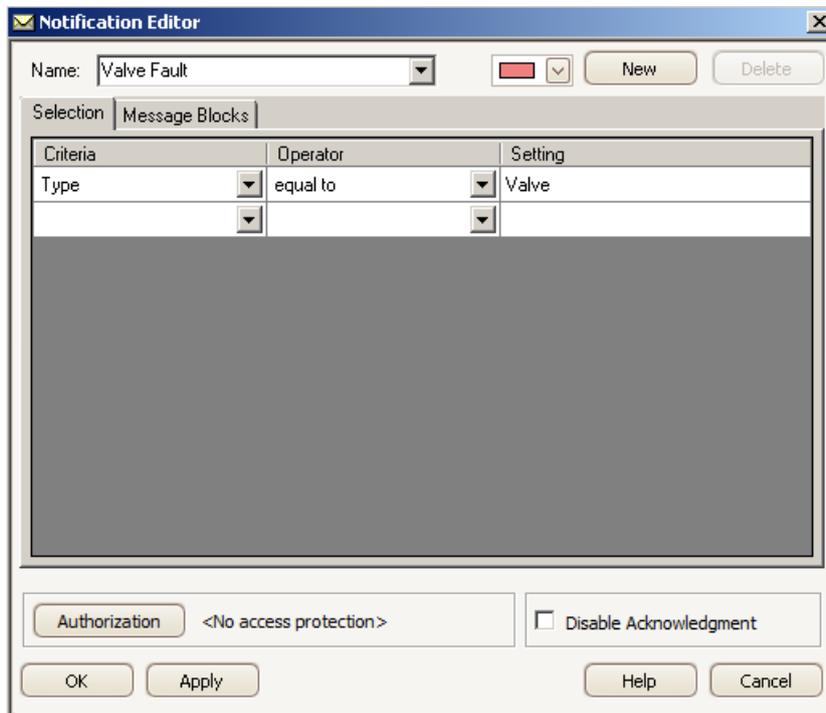
Procedure

1. Select "Edit > Notifications" to open the Notification Editor.

Note

While creating or modifying a schedule, you can click "Add New" to open the Notification Editor and configure a new notification to attach to the schedule.

2. In the "Name" field, replace the default name with a descriptive name for this notification. Although you can keep the default name, it is recommended that you rename the notification for easy recognition.
3. Click the color picker arrow and select a color from the color palette to associate with this notification.
4. Under the "Selection" tab, click the "Criteria" arrow and choose an available message block. Click the "Operator" arrow and choose a Boolean operator, such as "equal to". Depending on the selected message block, enter text or a value, or select an option in the "Setting" column.



5. Under the "Message Blocks" tab, configure the content to display in the subject and body of notification email and response email:
 - Select the message blocks to define for the notification.
The message blocks are configured in WinCC Alarm Logging. Information about message blocks is in the WinCC Information System under "Working with WinCC > Setting Up a Message System > Configuring the Message System".
 - Define the content for this notification email by entering text and dragging message blocks into the "Subject", "Message", and "Acknowledge" fields.
The same subject is used for the response email and its related notification email. The message of the notification email can be blank depending on the recipient.

NOTICE**Sensitive information in notifications**

Email is not a secure method for transmitting sensitive data. A best practice is to avoid configuring sensitive and proprietary information in a notification that may display in email.

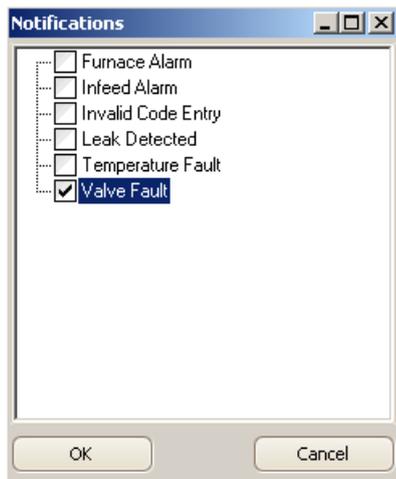
6. To permit only authorized users to create schedules using this notification, click "Authorization". Choose an authorization that was defined in the User Administrator and click "OK".
7. To prevent contacts from acknowledging the alarm condition in this notification by email, select "Disable Acknowledgment".
This is useful when an alarm is a high-priority critical alarm and only an authorized operator can acknowledge the alarm. If email acknowledgment was allowed, the alarm acknowledgment could be spoofed.

6.4 Configuration

- To specify translated text (Page 162), click "Apply" and then click the "Locale" button. Enter the translated text in each language and click "OK".
A "Locale" button displays for the notification name and for the "Subject", "Message", and "Acknowledge" fields. Names and content structure not configured with translated text will display in the language configured for the Calendar Option.
- Save the configuration.

Results

The new notification is added to the "Notifications" list for use in configuring schedules. The notification is also added and sorted alphabetically in the "Resources" window.



If the notification was created while configuring a schedule, the notification is added to the "Notifications" area in the Notification Schedule Editor.

6.4.2.6 Configuring a recurring schedule

Introduction

A recurring schedule is one schedule configured to repeat multiple times. Rather than adding the same schedule to a calendar several times, you can configure one recurring schedule that appears in the calendar at the specified dates and times.

Procedure

1. Create a new schedule or double-click a schedule to display its configuration.
2. In the editor, click "Recurrence" to open the "Recurrence" dialog.

3. Under "Recurrence time", set the time the schedule is to start and end.
This step is not necessary if you are adding a recurrence to a schedule where the time remains the same.
4. Under "Recurrence pattern", choose the frequency the schedule is to repeat.
You can set the schedule to repeat by the minute, hour, day, week, month, or year. Different options display based on the frequency you choose.
Example: To set a schedule to repeat every Friday, you would select "Weekly" and "Friday" and set "Recur every" to "1".

6.4 Configuration

5. Under "Range of recurrence", select when you want the recurrence pattern to start and end:
 - The recurrence has no end.
 - The recurrence is to end after a specified number of occurrences.
 - The recurrence is to end at a specified date.
6. After you finish configuring the recurrence, click "OK".
The schedule displays in the calendar at the times specified in the recurrence pattern. In Runtime, the recurrence symbol  displays to identify the schedule as recurring.

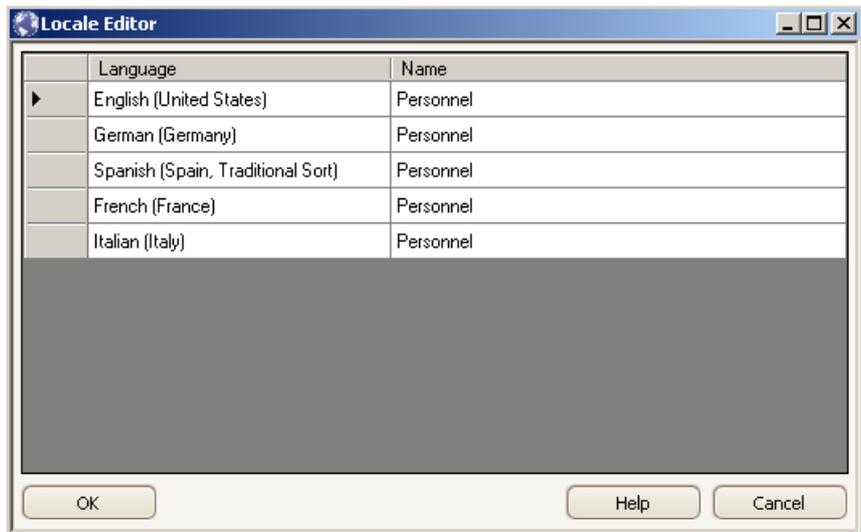
6.4.2.7 Adding translated text

Introduction

You can specify text to represent the translated names of schedules and resources to display in Runtime. Names not configured with translated text will display in the language configured for the Calendar Option. Depending on the installed Calendar Options, a schedule can be an action schedule or notification schedule. A resource can be an action, notification, contact group, or calendar.

Procedure

1. Open the appropriate editor and display the configuration for a schedule or resource.
2. Click the "Locale" button  to open the Locale Editor.
The languages configured with the WinCC project display. You can make more languages available by opening the "Text Library" editor and selecting "Language > Add/Remove". Information about the text library is in the WinCC Information System under "Setting Up Multilingual Projects".



- For each displayed language, click in the "Name" field and enter the translated text to display for the name.

	Language	Name
▶	English (United States)	Personnel
	German (Germany)	Personal
	Spanish (Spain, Traditional Sort)	Personal
	French (France)	Personnel
	Italian (Italy)	Personale

- Click "OK".
- Save the configuration.

6.4.2.8 Setting user authorizations

Introduction

The management of the user rights for the Calendar Options takes place in the WinCC User Administrator. Users are assigned various authorizations in it for operating and monitoring purposes.

The tasks of the WinCC User Administrator include:

- Creation and editing of users and user groups.
- Assignment and administration of access rights known as authorizations.

After users are configured in the User Administrator, you will need to assign authorizations to them. You can create authorizations for frequently used calendar scheduling functions.

Configuring user administration

- If desired, create authorizations for frequently used calendar scheduling functions in the User Administrator.
Example authorizations are "Production Line 1 Manager" and "Calendar Editing". Information about user administration is in the WinCC Information System under "Working with WinCC > Structure of the User Administration".
- Create groups and users and assign the appropriate authorizations.

Setting authorizations on resources

You can set an authorization on a resource to permit only authorized operators to create schedules using this resource. When operators attempt to select a resource they are not authorized to use, they receive the "Insufficient permission" message. When operators attempt to modify a schedule that contains at least one unauthorized resource, the schedule remains at its preconfigured date and time.

6.4 Configuration

Depending on the installed Calendar Options, a resource can be an action, notification, or contact.

Note

Operators can select a resource that is not assigned an authorization. To prevent unauthorized operators from creating or modifying any schedules, set an authorization on all resources.

1. In the editor, select the name of the resource to display its configuration.
2. Click "Authorization".
3. Choose an authorization that was defined in the User Administrator and click "OK".
4. Save the configuration.

6.4.3 Modifying notification schedules

6.4.3.1 Modifying contacts and notifications

Introduction

You can add or change the contacts and notifications used in a schedule from the Notification Schedule Editor. You can modify the configurations from the Contact Editor and the Notification Editor. You can quickly move a contact to a different contact group.

Any modifications to a contact or notification take effect immediately in all schedules where the contact or notification is referenced.

Adding to a schedule

1. Double-click a notification schedule to display its configuration in the editor.
If the schedule is configured with a recurrence, right-click the schedule and choose "Edit Series". For more information, see editing the recurrence series (Page 169).
2. Click the "Select" button under "Contacts" or "Notifications".
3. In the list, select preconfigured contacts or the notifications that the contacts can receive and click "OK".

Note

You can configure a new contact or a new notification by clicking "Add New" to attach to this schedule.

4. For each contact, set an "Escalation" time in minutes.
5. Save the configuration.

Changing the configurations

1. Display the configuration for a contact or notification in its editor.
 - From the Notification Schedule Editor, right-click a contact or notification row and choose "Edit".
 - From the Calendar Options Editor, select "Edit > Contacts" or "Edit > Notifications".
2. Make the changes and click "OK".

Note

To move a contact to another group, right-click the contact and drag it to the desired contact group.

The changes take effect immediately in all schedules where the contact or notification is referenced.

6.4.3.2 Renaming schedules and resources

Introduction

You can rename schedules and resources. You can quickly rename a schedule from a calendar view in the data window. The editors let you rename and make additional changes to the schedules and resources.

Depending on the installed Calendar Options, a schedule can be an action schedule or notification schedule. A resource can be an action, notification, or calendar.

Note

You cannot rename the "Default" calendar.

Renaming a resource

1. In the appropriate editor, select the resource you want to rename.
2. Enter a new name.
3. If the previous resource name contained translated text, click the "Locale" button. Change the entries to reflect the new translated names and click "OK".
4. Save the configuration.

The new name appears in the list of preconfigured resources, the "Resources" window, and the schedules that reference it.

Renaming a schedule

From calendar view in the data window

1. Click the schedule to highlight it and then click again.
2. Enter a new name.
If this schedule is in a recurrence series, the name changes only for the selected date. The name and time of other occurrences in the series do not change.

From the editor

1. Double-click the schedule. Optionally, right-click the schedule and choose "Open".
2. In the editor, enter a name and click "OK".
If this schedule is in a recurrence series, the name changes only for the selected date. The name of other occurrences in the series does not change.

Renaming a recurring schedule

1. Right-click a schedule configured with a recurrence and choose "Edit Series".
2. In the editor, enter a name and click "OK".
The name changes for all occurrences of the schedule.

6.4.3.3 Renaming contacts and contact groups

Introduction

You can rename contacts and contact groups.

If a WinCC user is renamed, the "Users" area reflects this change.

Renaming a contact

1. In the Contact Editor, expand the contact group and select the contact.
2. Right-click and choose "Rename Contact".
3. Enter a unique name and press <Enter>.
4. Save the configuration.

Renaming a contact group

1. In the Contact Editor, select the contact group.
2. Right-click and choose "Rename Group".
3. Enter a unique name and press <Enter>.
4. If the previous contact group contained translated text, click the "Locale" button. Change the entries to reflect the new name and click "OK".
5. Save the configuration.

Results

The new contact or contact group name appears in the list of preconfigured contacts and in the "Resources" window. The contact or contact group is renamed in the schedules that reference it.

6.4.3.4 Changing schedule dates

Introduction

Schedules are labeled in the calendars according to the start and end time. You can quickly change a schedule by dragging it to the desired date and time in a calendar view. You can also drag the schedule to a date in the "Date Navigation" window. The day and work week views allow you to quickly change the duration of a schedule. The editor lets you change the date and time and make additional changes.

Dragging and dropping schedules

In the displayed calendar view

Day:	Drag the schedule to the desired time slot on the same day. The schedule moves to the selected time. The configured duration remains the same. Depending on the selected time, the schedule may extend into another day.
Work Week:	<ul style="list-style-type: none"> • Drag the schedule to the desired time slot on the same day. The schedule moves to the selected time. • Drag the schedule to another displayed day and time slot. The schedule moves to the selected day and time slot. <p>The configured duration remains the same. Depending on the selected time, the schedule may extend into another day.</p>
Week, Month, or Timeline:	Drag the schedule to another day in the displayed view. The schedule moves to the selected date. The configured time and duration remain the same.

To the "Date Navigation" window

From any calendar view, drag the schedule to a date in the "Date Navigation" window. The schedule moves to the selected date. The configured time and duration remain the same.

Changing the duration

1. Select a schedule in the day or week view.
2. Move the mouse arrow over the start or end border until the arrow changes to a vertical arrow.
3. Drag the border to the desired time and then release.

Changing dates in the editor

1. Display the configuration for a schedule or recurring schedule in the editor.
2. Under "Start Time" and "End Time", set the time the schedule is to start and end.
3. Click "OK".
The schedule moves in the selected calendars to the modified date and time.

6.4.3.5 Changing a schedule and resource color

Introduction

You can change the color defined for a schedule or resource. You can also delete a schedule from a calendar and add it to another calendar. The way the schedule or resource color (Page 181) displays depends on the selections in the "Resources" window and the selected calendar view and multi-resource view. Depending on the installed Calendar Options, a schedule can be an action schedule or notification schedule. A resource can be an action, notification, contact, contact group, or calendar.

Changing a resource color

1. In the appropriate editor, select the resource name whose color you want to change.
2. Click the color picker arrow and choose a color.
3. Click "OK".
The color changes everywhere the selected resource name is used. If a calendar color is changed, the color changes for all schedules in that calendar.

Changing a schedule to a different calendar

1. Display the configuration for a schedule or recurring schedule in the editor.

Note

For a recurring schedule, you must edit the series. You cannot set an occurrence of the schedule in different calendars.

2. Click the "Calendar" arrow and choose the calendars:
 - Click a previously selected calendar to remove the schedule from that calendar.
 - Select the calendars where the schedule is to display. Click outside the list.

Note

Clicking  closes the list without saving the selections made.

3. Save the configuration.
The schedule displays in the selected calendars. The schedule color changes to match the color of each associated calendar.

6.4.3.6 Modifying or restoring a recurring schedule

Introduction

Modifying occurrences in a recurring schedule provides time-saving ways of working with schedules. You can override a schedule for a particular day, without changing the initial configured time of the recurring schedule. For example, you might want the schedule to start and end at a different time on one day.

You can make changes to all occurrences in the recurring schedule or change an occurrence for a specific day. In case you want to revert a recurring schedule to its initial configuration, you can remove all overrides.

Editing the recurrence series

1. Right-click a schedule configured with a recurrence and choose "Edit Series".
2. Make the desired changes.
3. Click "Recurrence" to edit the recurrence pattern and time (Page 137) in the "Recurrence" dialog. Click "OK".
4. When the confirmation message to remove the exceptions associated with this recurring schedule displays, click "Yes".
Any overrides made previously to this recurring schedule will be removed.
5. Click "OK" to save the configuration.
The modifications take effect immediately for all occurrences of the schedule.

Note

Modifying an instance of a recurring schedule

The "Recurrence" button is disabled if the user opens a single instance of a recurring schedule as the modification applies only to that instance.

Overriding a recurrence series

1. Double-click the schedule on the date you want to change. Optionally, right-click the schedule and choose "Open".
2. Make the desired changes.
3. Click "OK".
The modifications take effect immediately only for the selected date and do not change the other occurrences in the series.

Note

You can quickly override a date and time by dragging the schedule to the desired date.

Restoring a recurring schedule

Restoring one override

Right-click an occurrence of the schedule that contains an override and choose "Restore Default State". Only this occurrence of the schedule changes to the initial configured state of the recurring schedule.

Restoring all overrides

1. Right-click any occurrence in the recurring schedule and choose "Edit Series".
2. In the editor, click "Recurrence".
3. In the "Recurrence" dialog, click "OK" without making any changes.
4. Click "Yes" when the confirmation message displays. Click "OK" to close the editor. All modified and deleted occurrences are returned to the initial configured state of the recurring schedule. All occurrences of this schedule now have the same settings.

Removing a recurrence

1. Right-click any occurrence in the recurring schedule and choose "Edit Series".
2. In the editor, click "Recurrence".
3. In the "Recurrence" dialog, click "Remove Recurrence".
4. Click "OK" to close the editor. All occurrences except the initial configured instance of the schedule are removed.

Note

Rather than removing a recurring schedule, you may want to change the "End by" time so you can keep a record of past occurrences.

6.4.3.7 Deleting contacts and notifications

Introduction

You can delete contacts, contact groups, and notifications. Deleting a contact or notification from a schedule does not remove its configuration from the calendars. The contact or notification remains available in the "Contacts" or "Notifications" list for configuring other schedules.

In the Contact Editor, you can delete a contact from a contact group or delete a contact configuration when the contact is not used in a schedule. Deleting the configuration completely removes the contact from the calendars and the "Contacts" list.

Deleting a notification from the Notification Editor removes its configuration completely from the calendars. You cannot delete a notification if it is used in a schedule.

Effects of a deleted WinCC user

Deleting a contact configuration does not delete the WinCC user. Users are managed in the User Administrator. For more information, see the WinCC Information System under "Working with WinCC > Structure of the User Administration".

If a WinCC user is deleted, the user is not displayed in the "Users" area of the Contact Editor. The contact associations still exist. The contact's icon changes to a red X to indicate the associated user no longer exists.

Prerequisite

Before you can delete all occurrences of a contact or notification, you must delete the contact or notification from all schedules.

You can use the "Resources" window to find these schedules.

Example: To display all schedules that reference the contact "Desmond", select only "Desmond" in the "Resources" window. The check box next to the other resource groups should not be selected.

Deleting contacts or notifications from a schedule

1. Double-click a notification schedule to display its configuration in the editor.
If the schedule is configured with a recurrence and you want to delete the contact or notification from the series, right-click the schedule and choose "Edit Series".
2. Choose which contacts or notifications to delete:
 - To delete one or multiple contacts or notifications:
Select the desired rows in the "Contacts" or "Notifications" area. Right-click and choose "Delete".
When selecting rows, click a row to highlight it. To select a range, press <Shift> while clicking another row. All contacts or notifications between the two rows that you clicked are selected. To select multiples, press <Ctrl> while clicking additional rows. All contacts or notifications that you clicked are selected
 - To delete all contacts or notifications:
Right-click anywhere in the "Contacts" or "Notifications" area and choose "Clear".
3. Save the configuration.

Deleting a contact from a group

1. In the Contact Editor, expand the contact group and select the contact.
2. Right-click and choose "Delete Contact".
3. When the message appears, choose to delete this contact from the group and click "OK".
The contact is deleted only from the selected group.

6.4 Configuration

Deleting a contact configuration

1. In the Contact Editor, expand the contact group and select the contact.
2. Right-click and choose "Delete Contact".
3. When the message appears, choose to delete all occurrences of this contact and click "OK". If the contact has associations in other groups, a message displays to confirm deletion of this contact and all associations. After confirmation, the contact is deleted from all groups, the "Contacts" list, and the "Resources" window. The contact is no longer available for configuring schedules.

Deleting a contact group

1. In the Contact Editor, select the contact group.
You must delete all contacts from a group before you can delete it.
2. Right-click and choose "Delete Group".

Deleting a notification configuration

1. In the Notification Editor, select the notification to delete.
2. Click "Delete".
The notification is deleted from the "Notifications" list and the "Resources" window. The notification is no longer available for configuring schedules.

6.4.3.8 Deleting schedules and calendars

Introduction

You can delete schedules and calendars. Deleting a schedule removes the schedule and its associated resources from the selected calendars. The resources are not removed from the selection lists and are available for configuring other schedules. Depending on the installed Calendar Options, a resource can be an action, notification, contact, or contact group.

You can override a recurrence series by deleting a schedule on the date you do not want it to execute. This override does not change the default configuration of the recurring schedule.

Deleting a calendar removes the entire calendar and its associated schedules. A schedule referenced in the deleted calendar is removed, but remains in the other calendars.

Deleting a schedule from the calendar view

1. Right-click the schedule and choose "Delete". Optionally, click the schedule and press <Delete>.
2. If the schedule is in a recurrence series, a message displays asking if you want to delete all occurrences or only the occurrence of the selected day and time. Choose what to delete and click "OK".
Deleting the selected occurrence is an override to the schedule and does not affect the other occurrences in the series. Deleting the series deletes all occurrences of the schedule.

Deleting a schedule from the editor

1. Double-click a schedule to display its configuration in the editor.
2. To delete a schedule from a calendar, click the "Calendar" arrow and unselect the calendar. Click "OK".
3. To delete a schedule from all selected calendars, click "Delete".
If the schedule is in a recurrence series, only the occurrence for the selected day and time is deleted.

Deleting a recurring schedule from the editor

1. Right-click a schedule and choose "Edit Series".
2. In the editor, click "Delete".
All occurrences of the schedule are deleted.

Note

Rather than deleting a recurring schedule series, you may want to modify the schedule and change the "End by" time in the "Recurrence" dialog so you can keep a record of past occurrences.

Deleting a calendar

1. In the Calendar List Editor, select the calendar name to delete.
You cannot delete the "Default" calendar.
2. Click "Delete". When the confirmation message to delete this calendar and its associated schedules appears, click "OK".
The entire calendar and all schedules associated with this calendar are deleted permanently.
The calendar name is removed from the "Resources" window in the Calendar Options Editor.

6.4.4 Configuring the Calendar Control

6.4.4.1 Calendar Control

The Calendar Control is a .NET control that can be inserted into WinCC pictures using the WinCC Graphics Designer. The control in WinCC pictures at Runtime allows operators to view calendars. The control allows an operator to create, edit, and delete schedules.

You can configure this control to display the schedules of one or more configured calendars. View options provide single or multiple months, weeks, or days in a single view of the schedules. Additionally, you can configure a multi-resource view to show the schedules of multiple resources at the same time. Each date area in a multi-resource view displays the schedules associated with the selected resource.

The values assigned to the attributes of the control's object properties determine how the calendar displays to the operators in Runtime. You can set properties for the opening calendar view, work shift view, and navigation capabilities. In addition to providing the means for

6.4 Configuration

displaying and editing the schedules, the control's intrinsic events can be configured to trigger tag and C-script actions.

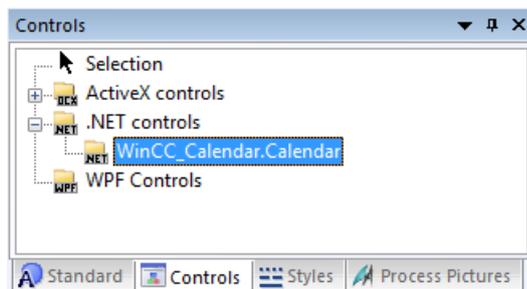
6.4.4.2 Configuring the Calendar Control

Introduction

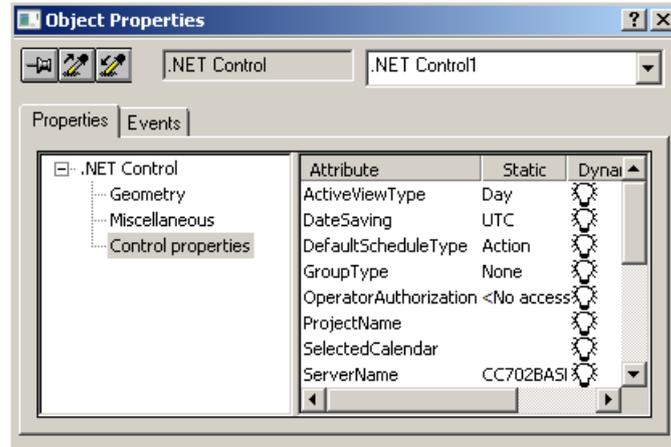
You insert the Calendar Control into WinCC pictures and configure the control to display the schedules associated with a calendar. You can customize the opening view and set properties to prevent or allow operators to use functions of the Calendar Control.

Procedure

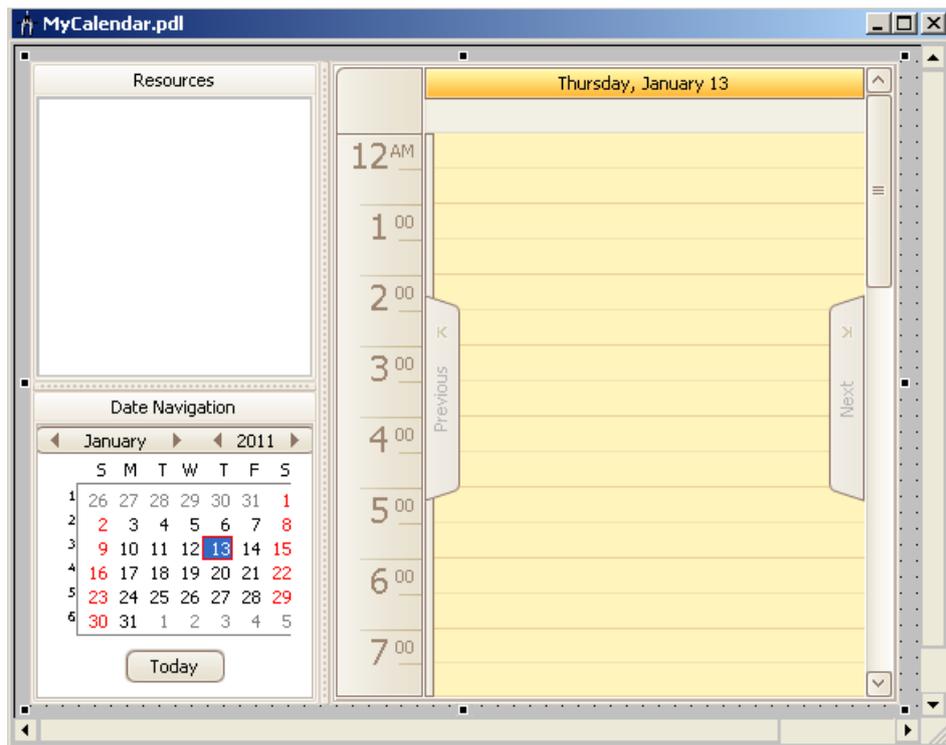
1. In the Graphics Designer, either create a new picture or open a picture where you want to insert a calendar.
2. In the Object Palette, click the "Controls" tab. Under ".NET controls", click "WinCC_Calendar.Calendar" and drag the control to the desired size in the picture.



3. Double-click the control. Click "Control properties" and set the attributes:
 - To configure how you want the calendar to display, set the appearance attributes (Page 176) of the object properties.



- To prevent or allow operators to use functions of the Calendar Control, set the navigation and usage attributes (Page 177) of the object properties.
4. Save the picture.
You can click the "Activate" button on the toolbar to see the appearance of the Calendar Control in Runtime.
This figure shows the Calendar Control configured to display schedules in the day calendar view.



6.4.4.3 Changing appearance of the Calendar Control

Introduction

You can set the properties in the WinCC Calendar Control to customize the opening view of a calendar in a particular WinCC picture. Additional pictures can contain calendars set to open with different views. You can set the properties for these pictures to restrict the view and scheduling to specific areas of a process, equipment, or personnel.

Prerequisite

- You opened the Graphics Designer and configured a picture with the Calendar Control.
- The object properties dialog of the Calendar Control is open.

Setting the opening calendar view

Double-click "ActiveViewType". Choose the standard calendar view to display when the calendar is opened: "Day", "Week", "Month", "WorkWeek", or "Timeline".

If you want a multi-resource view to display, double-click "GroupType" and choose "Date" or "Resource".

The control changes to reflect the selection.

Setting the default selected calendar

Double-click "SelectedCalendar". Enter the calendar name exactly as it appears in the "Resources" window and click "OK".

In Runtime, only the specified calendar and its schedules display on initial opening.

An incorrect calendar name entry results in no calendar selected and no schedules displaying on initial opening. To have all calendars selected with schedules displaying, leave the attribute value blank.

Setting a work shift

To set the start time:

Double-click "WorkStartTime". Enter the start time in 24-hour format (hours:minutes:seconds). Click "OK".

To set the end time:

Double-click "WorkEndTime". Enter the end time in 24-hour format (hours:minutes:seconds). Click "OK".

In Runtime, the control displays the specified time period in a different color than the background color.

To restrict the calendar view to display only the work shift time period:

Double-click "ShowWorkTimeOnly" to set the attribute to "True". Double-clicking toggles between "True" and "False". The work shift is visible in the day and work week calendar views.

6.4.4.4 Changing navigation and usage of the Calendar Control

Introduction

You can set the properties in the WinCC Calendar Control to customize the navigation capabilities in Runtime. You can set properties to prevent or allow operators to use functions of the Calendar Control.

Prerequisite

- You opened the Graphics Designer and configured a picture with the Calendar Control.
- The object properties dialog of the Calendar Control is open.

Preventing resources selection

Double-click "ShowResources" to set the attribute to "False". Double-clicking toggles between "True" and "False".

When the attribute is "False", the control hides the "Resources" window. In Runtime, the operator cannot select and view other resources.

Preventing date navigation

Double-click "ShowNavigation" to set the attribute to "False". Double-clicking toggles between "True" and "False".

When the attribute is "False", the control hides the date navigation window. In Runtime, the operator cannot select a date or date range to display future or previous schedules in the data window.

Preventing schedule editing

Double-click "ViewOnly" to set the attribute to "True". Double-clicking toggles between "True" and "False".

When this attribute is "True", the control places the data window in view-only mode. In Runtime, the operator cannot create and edit schedules.

Restricting schedule editing to authorized operators

Double-click "OperatorAuthorization". Select a predefined standard authorization in the WinCC User Administrator and click "OK". User-defined authorizations are not available for selection.

A logged in operator who is not assigned with the selected authorization can only view schedules. An operator with this authorization can create and edit schedules.

When this attribute is "NoAccessProtection", an authorization is not required. All operators can create and edit schedules using the actions, contacts, and notifications they are authorized to use.

Information about user administration is in the WinCC Information System under "Working with WinCC > Structure of the User Administration".

6.4.4.5 Calendar Control object properties

Control properties

The attributes in the Calendar Control object properties let you set how the calendar is to display in Runtime. You can customize the opening view and set properties to prevent or allow operators to use functions of the calendar control.

ActiveViewType

This attribute defines the default calendar view that displays when the Calendar Options Editor is opened. The schedules in the configured calendars display in the selected view in the data window. Double-clicking the attribute displays the following choices:

Day	Displays a 24-hour day format.
Week	Displays all 7 days of the week, beginning with Monday.
Month	Displays in a monthly format, beginning with the week that contains the selected day or date range.
WorkWeek	Displays a 5-day week, 24-hour day format. A work week contains Monday through Friday.
Timeline	Displays in a timeline format. A timeline highlights 15 days and begins with the selected day or first day of a date range.

The default value is "Month".

DefaultScheduleType

This attribute defines the default schedule type to open when double-clicking a date or time slot in the Calendar Options Editor. Double-clicking the attribute displays the following choices:

Action	Sets the Action Schedule Editor to open.
Notification	Sets the Notification Schedule Editor to open.

The default value is "Action" if both Calendar Options are installed.

GroupType

This attribute defines whether to place the Calendar Control in a multi-resource view in addition to the standard calendar views. The way the grouping displays depends on the selected calendar view. Double-clicking the attribute displays the following choices:

None	Grouping is off so that only the standard calendar view is visible.
Date	Grouping is by dates displayed horizontally with the resources underneath displaying either horizontally or vertically.
Resource	Grouping is by resources displayed horizontally with the dates underneath displaying either horizontally or vertically.

The default value is "None".

OperatorAuthorization

This attribute defines whether to place the Calendar Control in view only mode for unauthorized operators. Double-clicking the attribute lets you select a predefined standard authorization in the WinCC User Administrator. User-defined authorizations are not available for selection.

A logged in operator who is not assigned with the selected authorization can only view schedules. An operator with this authorization can create and edit schedules.

Setting the attribute value to "NoAccessProtection" indicates no authorization is required. All operators can create and edit schedules using the actions, contacts, and notifications they are authorized to use.

The default value is "<No access protection>".

ProjectName

This attribute identifies the project name that is used to configure the Calendar Control for WebNavigator.

The default value is blank.

SelectedCalendar

This attribute defines whether to display the schedules of a specific calendar or all calendars when the Calendar Options Editor is opened initially in Runtime. Double-clicking the attribute opens a dialog for you to enter the calendar name exactly as it appears in the "Resources" window.

An incorrect calendar name entry results in no calendar selected and no schedules displaying on initial opening.

The default value is blank.

ServerName

This attribute identifies the server that the Calendar Option is accessing. Double-clicking the attribute opens a dialog for you to connect to a different server name.

This attribute is useful in WinCC solutions where clients can be connected to multiple servers.

The default value is the server name where the WinCC project is connected.

ShowNavigation

This attribute defines whether to allow or prevent the operator's capability to use date navigation in the calendar. Double-clicking the attribute toggles between "True" and "False".

When this attribute is "False", the control hides the "Date Navigation" window. The operator cannot select a date or date range to display future or previous schedules in the data window.

The default value is "True".

6.4 Configuration

ShowResources

This attribute defines whether to allow or prevent the operator's capability to select resources. Double-clicking the attribute toggles between "True" and "False".

When this attribute is "False", the control hides the "Resources" window. The operator cannot select and view other resources.

The default value is "True".

ShowStatus

This attribute defines whether to display or hide the status bar. Double-clicking toggles between "True" and "False".

When this attribute is "True", the operator can see the status bar.

The default value is "False".

ShowWorkTimeOnly

This attribute defines whether to restrict the day and work week calendar views to the time frame specified in the "WorkStartTime" and "WorkEndTime" attributes. Double-clicking the attribute toggles between "True" and "False".

When this attribute is "True", the calendar view displays only the work shift time period. An operator can see only the schedules within the specified work shift.

When this attribute is "False", the calendar view displays all 24 hours and the schedules.

The default value is "False".

ViewOnly

This attribute defines whether to allow or prevent the operator's capability to create and edit events. Double-clicking the attribute toggles between "True" and "False".

When this attribute is "True", the control places the data window in view-only mode and prevents the operator from creating and editing schedules.

The default value is "False".

WorkStartTime

This attribute defines a time for a work schedule shift to start in the calendar. When set with the "WorkEndTime" attribute, the control displays the specified time period in a different color than the background color. Double-clicking the attribute opens a dialog for you to enter the start time in 24-hour format (hours:minutes:seconds).

The default value is "09:00:00".

WorkEndTime

This attribute defines the time for a work schedule shift to end in the calendar. When set with the "WorkStartTime" attribute, the control displays the specified time period in a different color than the background color. Double-clicking the attribute opens a dialog for you to enter the end time in 24-hour format (hours:minutes:seconds).

The default value is "18:00:00".

6.5 Operation in Runtime

6.5.1 Event Notifier in Runtime

Preconfigured schedules

The Event Notifier Server sends an email to the associated contacts when active alarm messages match the configured notification schedules between the specified start and end time. Email is also sent to the contacts when the messages remain unacknowledged.

The preconfigured notification schedules and the opening view of the calendar that operators see are determined during configuration. Any functions of the Calendar Control that an operator is allowed to use can be configured.

Schedules and resource colors

In standard calendar views, a schedule displays in the color of the associated calendar. If a schedule is associated with multiple calendars, the color of the schedule displays as one of the selected calendars. Typically, the color displays as the first selected calendar when the schedule was configured.

In multi-resource views (Page 185), the color configured for a selected resource displays as the background color for the resource in the data window. The schedule displays as a neutral color to complement the background color.

The following symbols may display on a schedule:

	Displays during the start and end time of an active schedule.
	Identifies a recurring schedule.
	Indicates whether the start or end time of a schedule occurs from 0:00 to 11:59 (12:00 AM to 11:59 AM). This symbol displays in the timeline view or when the schedule covers a range of days.
	Indicates whether the start or end time of a schedule occurs from 12:00 to 23:59 (12:00 PM to 11:59 PM). This symbol displays in the timeline view or when the schedule covers a range of days.

Scheduling capabilities

When configured to do so, an operator can create and edit notification schedules and calendars depending on the assigned authorizations. Operators may be allowed to create and edit contacts and contact groups.

6.5 Operation in Runtime

Operators cannot create and edit notifications during Runtime. They can choose only from the authorized notifications available in the "Notifications" list. The notifications are created during configuration.

Drag and drop allows quick editing of the schedules. Any changes that the operators make take effect immediately.

Acknowledging messages

Any contact that receives a notification email can acknowledge a message by replying to the notification email. If a contact's work schedule shift ends, the contact can acknowledge messages beyond the scheduled time period.

Note

When acknowledging messages, contacts are not to modify the "Subject" field in the response email. The notification email and its related response email share a unique ID.

When a message is acknowledged by the local WinCC operator or via the Event Notifier option, a response email is sent to all contacts who received email for the specific message.

Message escalation

The server emails messages to a contact only if the alarm is not acknowledged before the contact's configured escalation time. The messages are alarms that match the configured notifications. The email subject and body are formatted and sent in each contact's configured language.

6.5.2 Viewing schedules and resources

Introduction

The schedules in the configured calendars display when a picture that contains the Calendar Control is opened in Runtime. The Calendar Control is configured to display in a standard calendar view or a multi-resource view (Page 185).

If the "Resources" window is configured to display, operators can view or hide the schedules for a resource. The schedules associated with the selected resources display in the data window. Depending on the installed Calendar Options, a schedule can be an action schedule or notification schedule. A resource can be an action, notification, contact, or calendar.

If the "Date Navigation" window is configured to display, operators can view schedules for a selected day or a range of dates. The calendar view changes based on the selections made in the "Date Navigation" and data windows.

Viewing schedules for selected resources

In the "Resources" window, select the resource names so that a check mark appears. The schedules for all selected resources are visible for the scheduled dates. The schedules for any calendars not selected are hidden.

When a date or time slot contains more schedules than what displays in the calendar view, an arrow displays on the date or time slot. Clicking the arrow opens the "Agenda" list to display the additional schedules that are not visible on that date or time slot. You can double-click a schedule in the list to display its configuration in the editor.

Navigating to schedules in "Date Navigation" window

Selecting dates in the "Date Navigation" window displays the schedules for the selected dates in the data window. You can do the following tasks in the "Date Navigation" window to show dates:

- Click a day to show the selected day in the day view.
- Highlight a range of days to show the selected range in the month view. You can highlight the range by dragging over the desired days. You can also click a day and press <Shift> while clicking another day.
- Click a day and then press <Ctrl> while clicking additional days to show the selected days as a series of day views.
- Click the "Today" button to show schedules for the current day in the day view.

Navigating to schedules in data window

Right-clicking on a calendar view in the data window provides various ways to navigate to schedules. The resulting view depends on the selected day and date range of the current view.

"Go to Today" from menu

Click this option to display the current day or the work week, week, month, or timeline that contains the current day. In each resulting view, the current day is highlighted. On the timeline view, the current day is the first day in the timeline.

"Go to Date" from menu

Click this option to open a dialog to enter a specific date and to select the calendar view to display. You can choose the date from a pop-up calendar. The view changes to the specified view with the work start time highlighted on the specified date.

"Go to This Day" from menu

This option is available only on the month and week views and when one date is selected. If a range of days is selected, this option is gray and cannot be selected.

With a date selected in the view, click this option to display the selected date in day view. The work start time is highlighted.

"Time Scales" and "Time Scale Captions" from menu

These options are available only on the timeline view. You can change the amount of time shown in the timeline and select which captions to display.

- Point to "Time Scales" and choose the increment of time to show in the timeline: "Year", "Quarter", "Month", "Week", "Day", "Hour", or "00:15:00". Selecting the same scale again switches between hiding and showing the scale.
- Point to "Time Scale Captions" and choose the caption for the time scale you want to see. Selecting the same caption again switches between hiding and showing the caption.

Hours and day range selection

You can select a range of hours or days in the applicable calendar views in the following ways:

- Drag over the desired hours or days in the view.
- Click an hour or day and then press <Shift> while clicking another hour or day.

"Next" and "Previous" tabs

The data window contains "Next" and "Previous" tabs. You can view the next or prior schedules in a calendar view.

- Click the "Next" tab to show the calendar view with the next schedules in the selected time span. For example, with the week view selected, clicking "Next" causes the current week view to change to the week containing schedules after the current week.
- Click the "Previous" tab to show the calendar view with the prior schedules in the selected time span.

Changing the calendar view

Standard view

Right-click in the data window. Select "Change View To" and choose a calendar view: "Day View", "Work Week View", "Week View", "Month View", or "Timeline View". The days highlighted in the resulting view depend on the day or range of days selected in the "Date Navigation" window.

Multi-resource view

Right-click in the data window. Select "Grouping" and choose a group type: "Date", "Resource", or "None". The way the grouping displays depends on the standard calendar view.

Changing the time ruler

In the day or work week view, you can customize the ruler to display in a specific time zone. You can also change the time increment that displays.

Time zone

Right-click the time ruler and choose "Customize Time Ruler". In the "Time Ruler" dialog, enter a descriptive name in the "Label" field. Choose the desired time zone and select the check box to adjust the time when daylight saving time occurs. Click "OK".

The calendar control changes to reflect the specified label name and time zone.

Time increment

Right-click the time ruler and choose the increment of time in minutes to show in the ruler: "60, 30, 15, 10, 6, 5". The ruler changes to reflect the selected increment.

Refreshing calendar data

Right-click in the "Resources" window or "Date Navigation" window and choose "Refresh".

6.5.3 Multi-resource views

Introduction

A multi-resource view allows operators to see schedules of multiple resources at the same time. A multi-resource view displays in addition to a standard calendar view. Multiple date areas are displayed vertically or horizontally. Each date area displays the schedules associated with the selected resource.

When configured to do so, operators can switch between the resource and date views. They can disable the multi-resource view so that only a standard calendar view displays.

Depending on the installed Calendar Options, a schedule can be an action schedule or notification schedule. A resource can be an action, notification, contact, or calendar.

Color configuration and navigation

A typical multi-resource view would be viewing the schedules of three contacts or the schedules of production lines.

For quick recognition, the color configured for a selected resource displays as the background color for the resource in the data window. The schedules display as a neutral color to complement the background color.

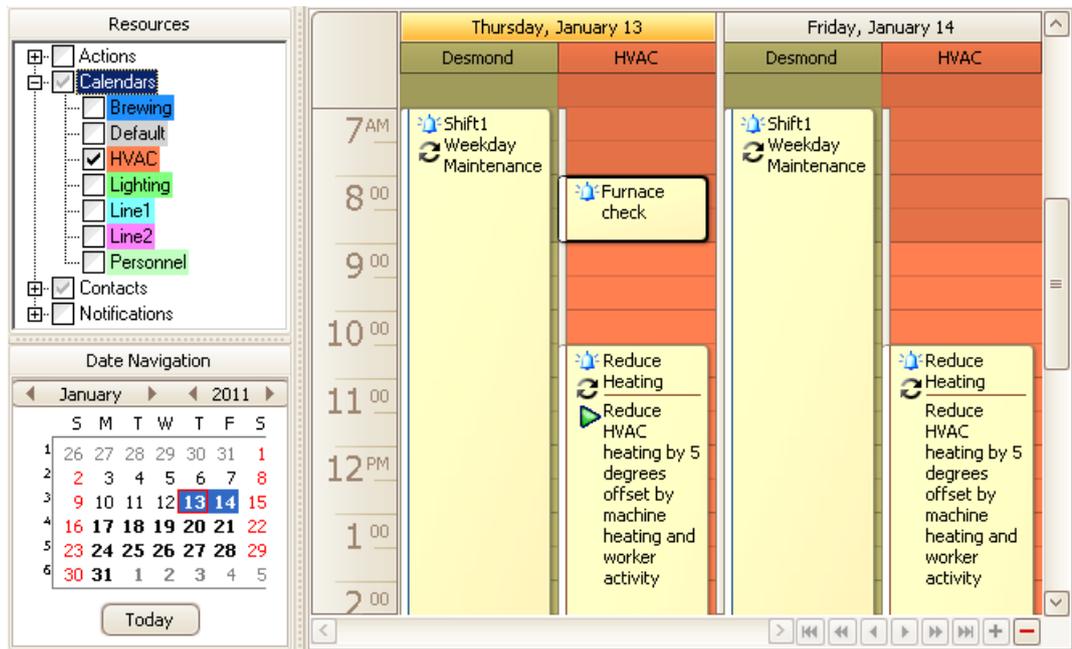
When several resources are selected, the readability of the schedules is reduced. Operators can use the navigation toolbar to decrease the visible resources. The toolbar provides navigation, scrolling, and increasing/decreasing the number of visible resources.

Date view

When the multi-resource view is "Date", the view shows the grouping by dates displayed horizontally with the resources underneath displaying either horizontally or vertically. Only schedules for the resources selected in the "Resources" window are visible in the views.

The following figure shows the schedules for two calendars and a contact displayed with the multi-resource view as date. The standard calendar view is work week.

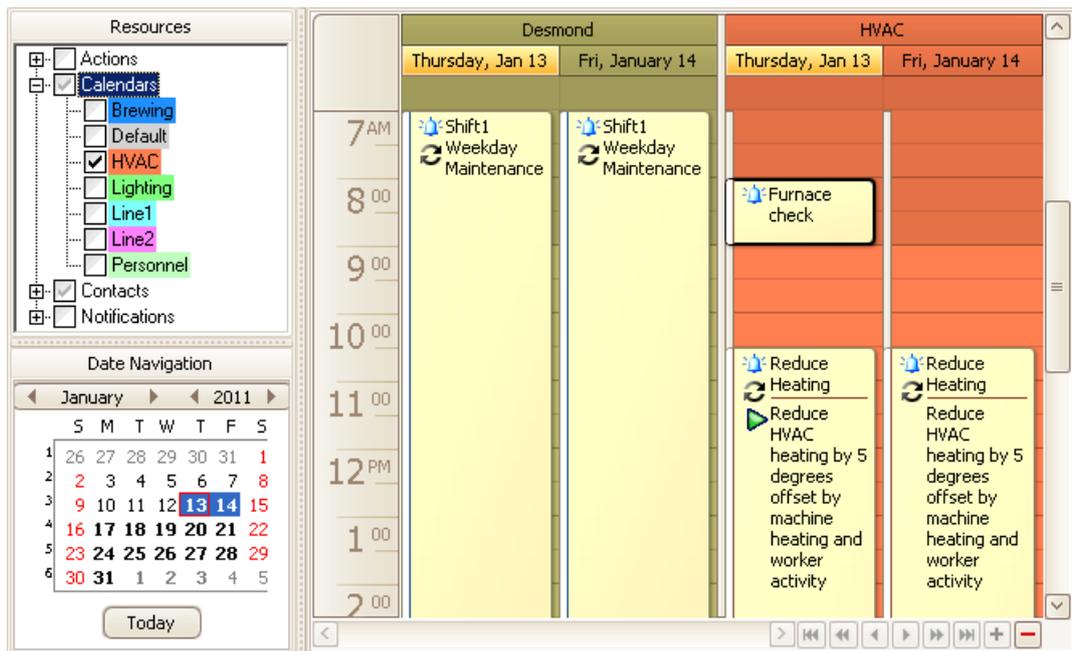
6.5 Operation in Runtime



Resource view

When the multi-resource view is "Resource", the view shows the grouping by resources displayed horizontally with the dates underneath displaying either horizontally or vertically. Only schedules for the resources selected in the "Resources" window are visible in the views.

The following figure shows the same week schedules displayed with the multi-resource view as resource.



6.5.4 Creating notification schedules

Introduction

Operators can create notification schedules in Runtime using only configured contacts and notifications that they are authorized to use. An operator not assigned the authorization for any of the notifications or contacts cannot create any schedules. Rather than adding the same schedule to a calendar several times, operators can configure one recurring schedule that displays in the calendar at the specified dates and times.

If configured to do so, operators can create contacts and contact groups.

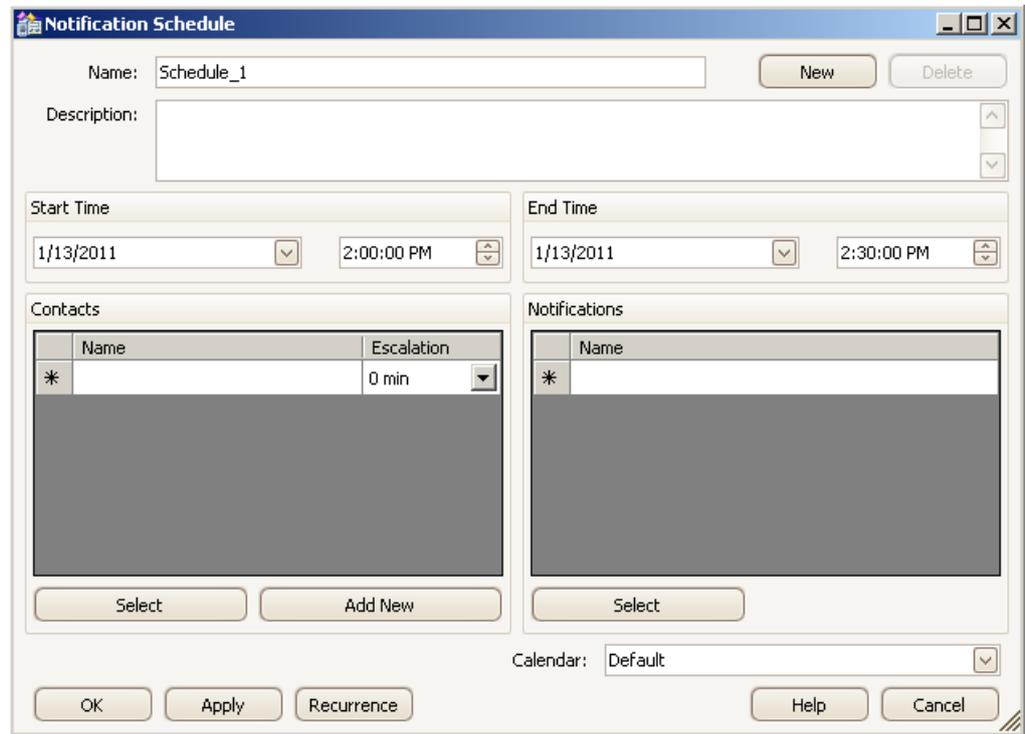
Creating a notification schedule in Runtime is the same as during configuration. For detailed instructions, see the "Configuration" chapter in this documentation.

Procedure

1. Double-click a date or time slot to open the Notification Schedule Editor. Optionally, right-click a date or time slot and choose "New Notification Schedule".

Note

If other schedule types are available and the default schedule type is not notification, you must right-click and choose "New Notification Schedule" for this editor to open.

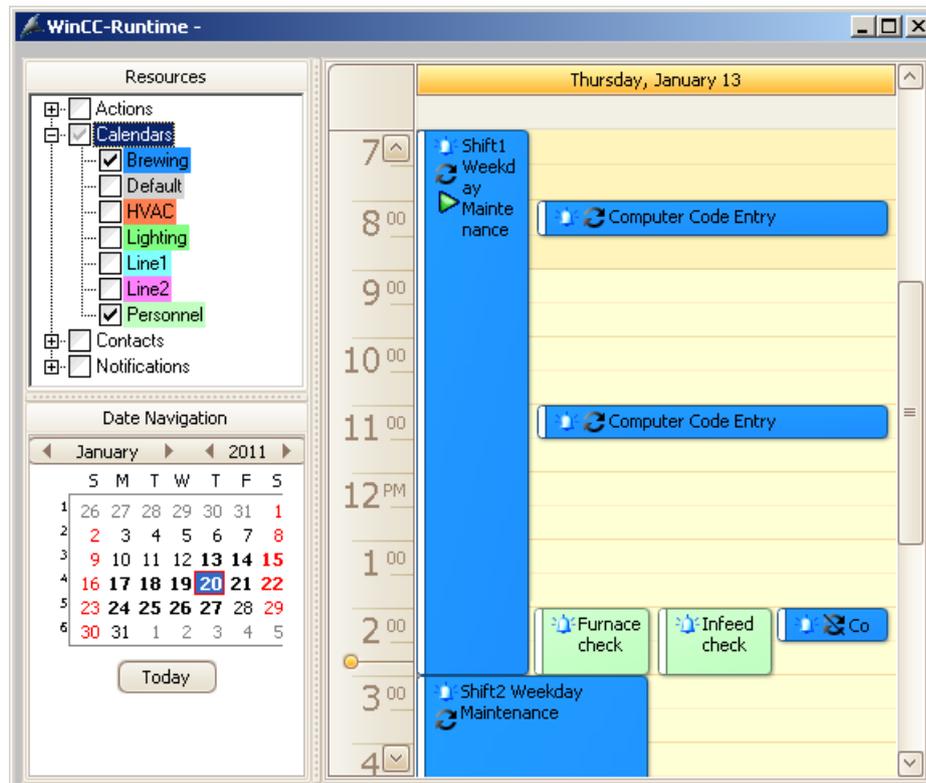


2. Configure the notification schedule:
 - Enter a name for the schedule. Optionally, enter a description.
 - Set the time the schedule is to start and end.
 - Select preconfigured contacts and notifications that you are authorized to use. For each contact, set an "Escalation" time in minutes that an alarm must remain unacknowledged before the contact is notified.
 - Optionally, configure new contacts.
 - Select the calendars where the schedule is to display.
 - Optionally, configure the schedule to repeat.
3. After you finish configuring the schedule, click "OK".

Results

The notification schedule displays in the selected calendars at the specified times. The color of a schedule is the same as its associated calendar. The way the schedule color (Page 181) displays depends on the selection of multiple calendars in the "Resources" window and a multi-resource view.

An arrow displays in a date or time slot when it contains schedules that are not visible. Clicking the arrow displays the additional schedules in the "Agenda" list.



6.5.5 Modifying notification schedules

Introduction

Operators can modify only schedules that contain contacts and notifications they are authorized to use. Operators not assigned the authorization for any of the preconfigured contacts or notifications cannot modify any schedules.

Modifying a notification schedule in Runtime is the same as during configuration. For detailed instructions, see the "Configuration" chapter in this documentation.

Using the Notification Schedule Editor

1. Double-click a notification schedule to display its configuration.
2. Make the desired changes in the editor:
 - Renaming schedule:
Enter the text in the "Name" and "Description" fields.
 - Changing schedule time:
Set the time the schedule is to start and end.
 - Deleting contacts or notifications:
Select the desired rows. Right-click and choose "Delete". To delete all contacts or notifications, right-click and choose "Clear".
 - Adding preconfigured contacts or notifications:
Click the "Select" button under "Contacts" or "Notifications". In the list, choose the contacts or notifications and click "OK". For each contact, set an "Escalation" time in minutes.
 - Configuring or changing contact associations:
Click the "Add New" button under "Contacts". Enter the necessary contact information and click "OK".
 - Adding or changing recurrence:
Click "Recurrence" and set the recurrence pattern and time.
 - Removing recurrence:
Click "Recurrence" and then click "Remove Recurrence".
 - Changing associated calendar:
Click the "Calendar" arrow and select the calendars where the schedule is to display.
3. After you finish modifying the schedule, click "OK".

Dragging and dropping schedules

Quickly modify a schedule by dragging it to the desired date and time in a calendar view or to a date in the "Date Navigation" window. The day and work week views let you quickly change the duration of a schedule by dragging its start or end border to the desired time.

If the schedule contains a contact or notification that you are not authorized to use, the schedule remains at the configured date and time. If you have sufficient permissions, the schedule moves to the new date and time.

6.5.6 Deleting and restoring schedules

Introduction

Operators can modify schedules that contain resources they are authorized to use. Operators not assigned the authorization for any of the preconfigured resources cannot modify any schedules. Depending on the installed Calendar Options, a resource can be an action, notification, contact, or contact group.

Deleting schedules

Quickly delete a schedule from all calendars by right-clicking the schedule and choosing "Delete". Optionally, you can select the schedule and press <Delete>. If the schedule is in a recurrence series, you will choose whether to delete all occurrences or only the occurrence of the selected day and time.

Deleting the selected occurrence is an override to the schedule and does not affect the other occurrences in the series. This capability is helpful when you do not want the schedule to execute on the selected date. Deleting the series deletes all occurrences of the schedule.

From the schedule editor, you can delete a schedule or an occurrence on the selected day in a recurring schedule by clicking the "Delete" button. Clicking the "Calendars" arrow and unselecting a calendar lets you remove the schedule from that calendar.

Restoring a recurring schedule

You can restore all modified and deleted occurrences to the initial configured state of the recurring schedule:

1. Right-click any occurrence in the recurring schedule and choose "Edit Series".
2. In the editor, click "Recurrence".
3. In the "Recurrence" dialog, click "OK" without making any changes.
4. Click "OK" to close the editor.

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