



Notifier User Guide
IGSS Version 9.0

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Chapter 1: Introduction to the Notifier module

1.1 What is Notifier?

Notifier is an alarm management system. The program can be installed and run on any Windows computer and is used as a "hub" for collecting and displaying alarms from multiple plants. **Notifier** is a well integrated add on to IGSS and has a line of features alongside this **SCADA**¹ system.

The incoming alarms can either be acknowledged in **Notifier** or be forwarded to operator mobile phones as text messages, where acknowledgement also can occur. The collected alarms can also be forwarded as e-mail alerts. **Notifier** also allows the operators to control IGSS objects state/values by sending SMS messages from their mobile phones.

All in all, with **Notifier** you get more flexibility in the whole alarm and plant monitoring process than with the basic available tools in IGSS.

1.2 To the reader of this help file

The **Notifier** module is both used by the system designer and the operator and this help file addresses both user types.

System designer tasks in Notifier

The system designers tasks is to set up the **duty plan**² for the operators and ensure that alarm monitoring and acknowledgement with SMS is working as desired for the end-user. Basic tasks for the system designer will be:

- Set up communication settings between **Notifier** and the operator mobile phones
- Set up communication settings between **Notifier** and iGSS
- Create operator profiles (could also be an operator task)
- Set up duty calendars with duty shifts for the operators (could also be an operator task)
- Set up other global settings for how **Notifier** should function

Operator tasks in Notifier

The operator(s) uses **Notifier** to allow alarm monitoring and acknowledgement with SMS messages. The most common tasks for the operator(s) will be:

- Create operator profiles (could also be a system designer task)
- Set up duty calendars with duty shifts for the operators (could also be a system designer task)

¹Supervisory Control & Data Acquisition

²A time block that shows which operators that are on duty in the given time period.

- Start/stop the alarm message sending and receiving to **Notifier**
- Change duty calendars if more than one are used

Assumptions for the user

The **Notifier** interface is very similar to Microsoft Outlook's interface, therefore it would be an advantage to have experience with Outlook when using this module, but it is not a requirement.

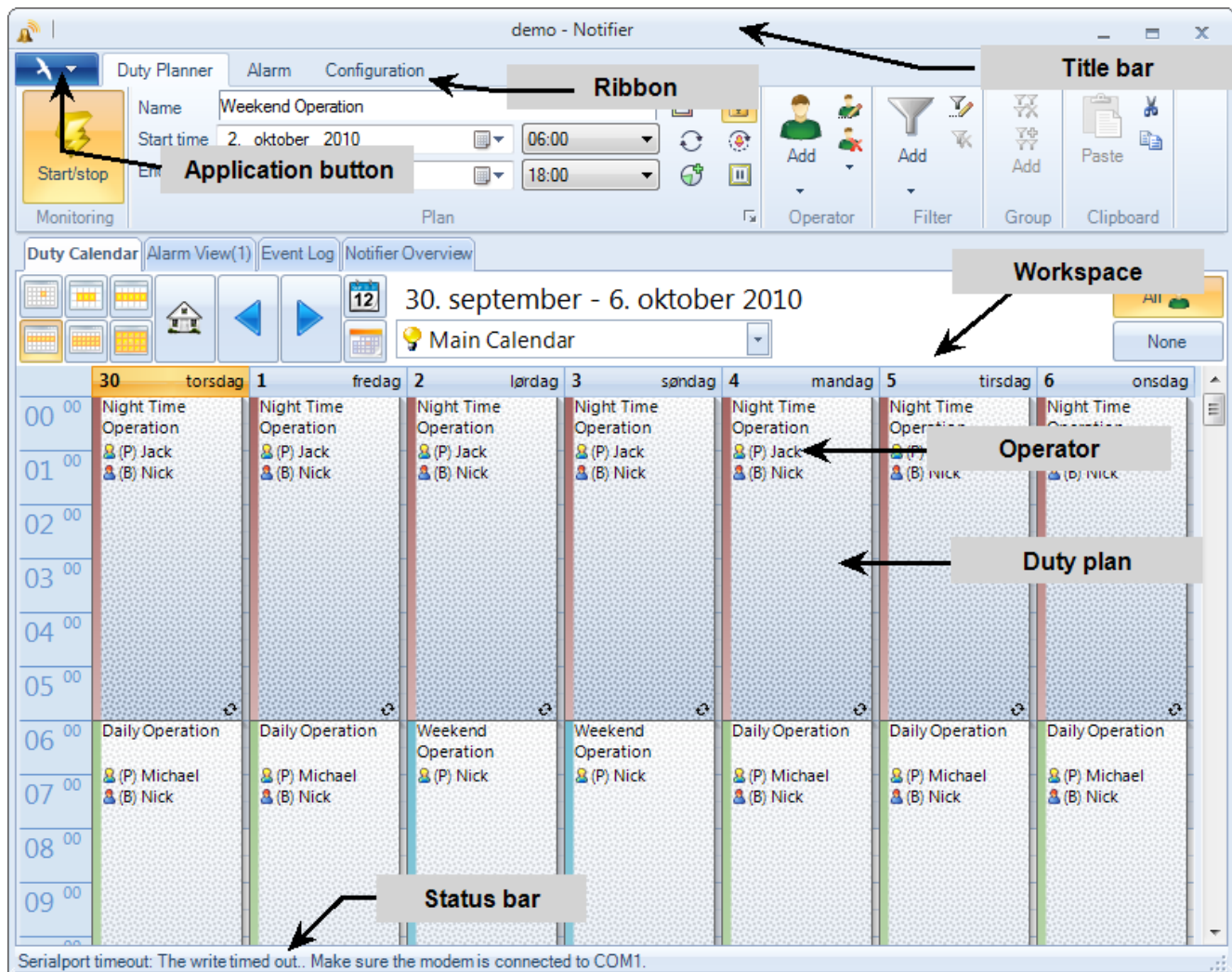
Getting Started

For the first-time user, there's a Getting started guide (page 21), which quickly helps you try out the software. This guide is mostly intended for the system designer.

Chapter 2: The Notifier user interface

2.1 The Notifier interface

This page explains how the different elements in the user interface are named. Some of them are standard Windows Vista conventions and some are specific to the **Notifier** program. These conventions will be used throughout the help file.



Elements in the Notifier interface

Here is a short description of each element in the user interface. These will also be explained more thoroughly later in the help file.

Element	Description
Application button	This is a standard convention for Windows Vista. This field contains file options such as, New, Open, Save, Print, etc. Also the Notifier options (page 51) menu is found here.
Title bar	In here the name of your current Notifier configuration is displayed.
Ribbon¹	This is also a standard convention for Windows Vista. The Ribbons hold the available options for the three subjects: <ul style="list-style-type: none"> • Duty Planner ribbon (page 8) - Controls the duty calendar² setup. • Alarm ribbon (page 7) - Tools for the alarms handled by Notifier. • Configuration Ribbon (page 9) - Controls the different objects in the Notifier configuration, servers, operators, filters etc.
Workspace	The workspace³ is divided into the following tabs: <ul style="list-style-type: none"> • Duty Calendar - This is where you view and edit duty calendars. • Alarm View - Contains a list of alarms, currently controlled by Notifier. • Event Log - Contains a list of events during the current Notifier session. • Notifier Overview - This is where you get a graphical overview of the configuration. <p>For a more detailed description of each, see Tabs in the Workspace (page 5)</p>
Operator	The operators are the ones that will receive the alarm messages from Notifier and will be able to acknowledge these by SMS.
Duty plan	The duty plan⁴ is where the duty hours of each operator is defined, and which duty role each operator should have at the current duty time.
Status bar	This bar shows the status of the current configuration, i.e. if it is running or if any errors has occurred.

¹The Ribbon is a new term/element in the Microsoft universe. The Ribbon replaces the well-known toolbars in applications. The Ribbon provides quick access to the most commonly used functions in the application. The Ribbon is divided into logical groups (the tabs) and each tab is divided into sections (the blocks in the tab). The Ribbon is context-sensitive which means that only relevant functions are accessible dependent on the current user action.

²A calendar which contains the duty plans.

³An area of the screen, similar to the desktop, where all the user tasks are executed, i.e. the duty calendar.

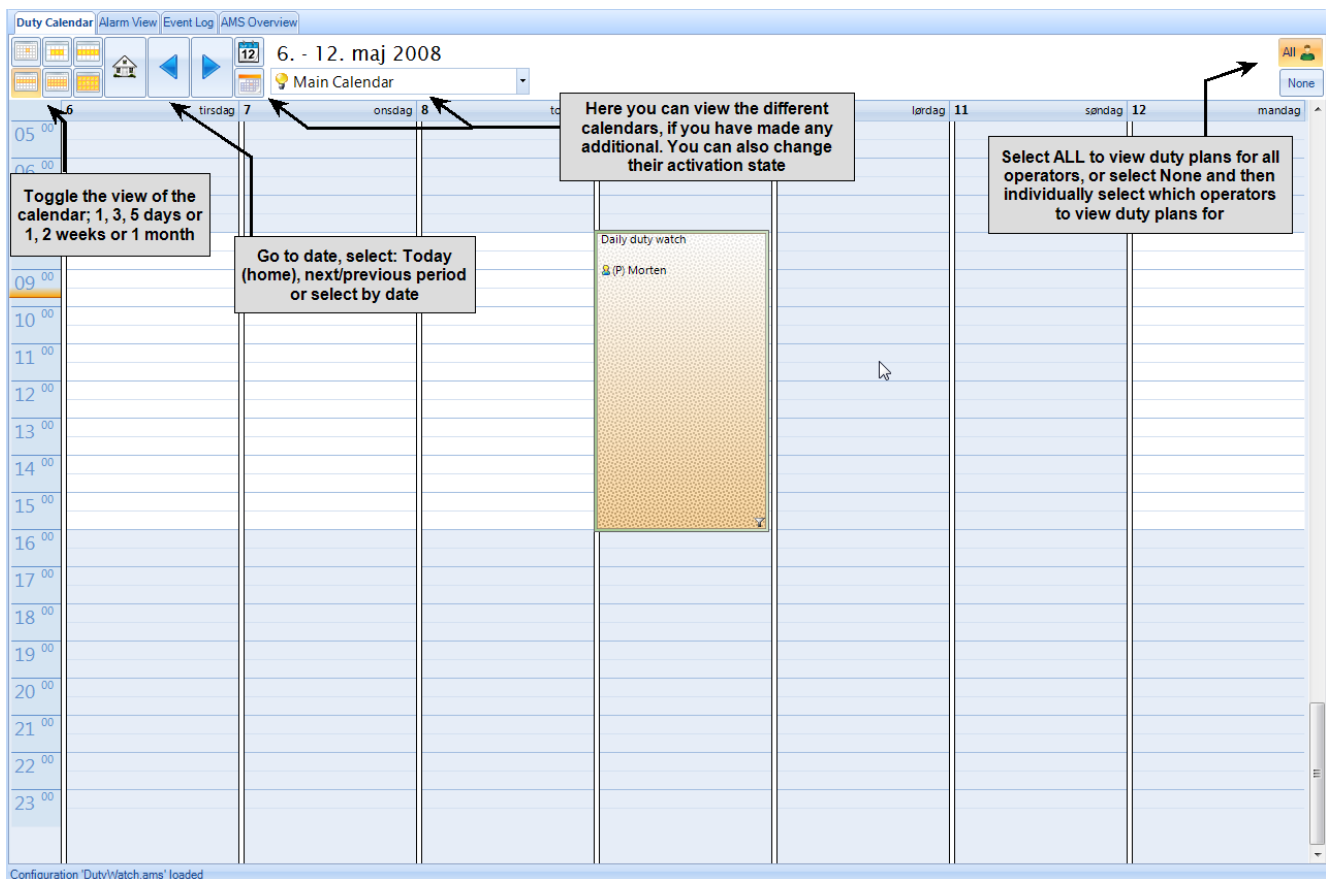
⁴A time block that shows which operators that are on duty in the given time period.

2.2 Tabs in the Workspace

Below is a description of each of the four different tabs available in the **workspace**¹ of **Notifier**, and how to use these.

Duty Calendar

This view shows the duty plans in your configuration for a specific time period.



Alarm List

This list contains the alarms that **Notifier** has received from its **SCADA**² system(s). Here you can view all status information for each alarm.

¹An area of the screen, similar to the desktop, where all the user tasks are executed, i.e. the duty calendar.

²Supervisory Control & Data Acquisition

The screenshot shows the 'IGSS Alarms (1)' window with a table of active alarms. The table has columns for Server station, Object name, Description, Start date, Start time, Acknowledge date, Acknowledge time, End date, End time, Value, Worst, Priority, Alarm text, Area name, and User. Two callout boxes provide instructions: one pointing to a red alarm row stating 'Double click an alarm to get a detailed view of its conditions', and another pointing to a context menu over a black alarm row stating 'Right click an alarm to acknowledge or remove it. Note that acknowledged alarms change color from red to black'. A third callout points to a filter dropdown menu stating 'You can use filters in the list, to view only certain alarms'.

Server station	Object name	Description	Start date	Start time	Acknowledge date	Acknowledge time	End date	End time	Value	Worst	Priority	Alarm text	Area name	User
Plant server	pr2	Oxygene pressure	13-05-2008	10:00:38			13-05-2008	10:00:54	607.1	607.1	12	High alarm limit e...	Global	
Plant server	System	Disk and printer monitor	13-05-2008	09:45:43	13-05-2008	10:02:47			63	63	5	Database size ab...	Global	AMS

Station: Plant server filters alarm: 212 - q1 in Global

Event log

This list shows all the latest events in the configuration.

The screenshot shows the 'Event Log' window with a list of events. At the top, there are buttons for 'Clear event log window' and 'Open file log folder', and a search box. Callout boxes provide instructions: one pointing to the 'Clear event log window' button stating 'Clears the event log list', one pointing to the 'Open file log folder' button stating 'Opens the folder in windows, where the log files are being stored', and one pointing to the search box stating 'Here you can search for certain events in the event log list'.

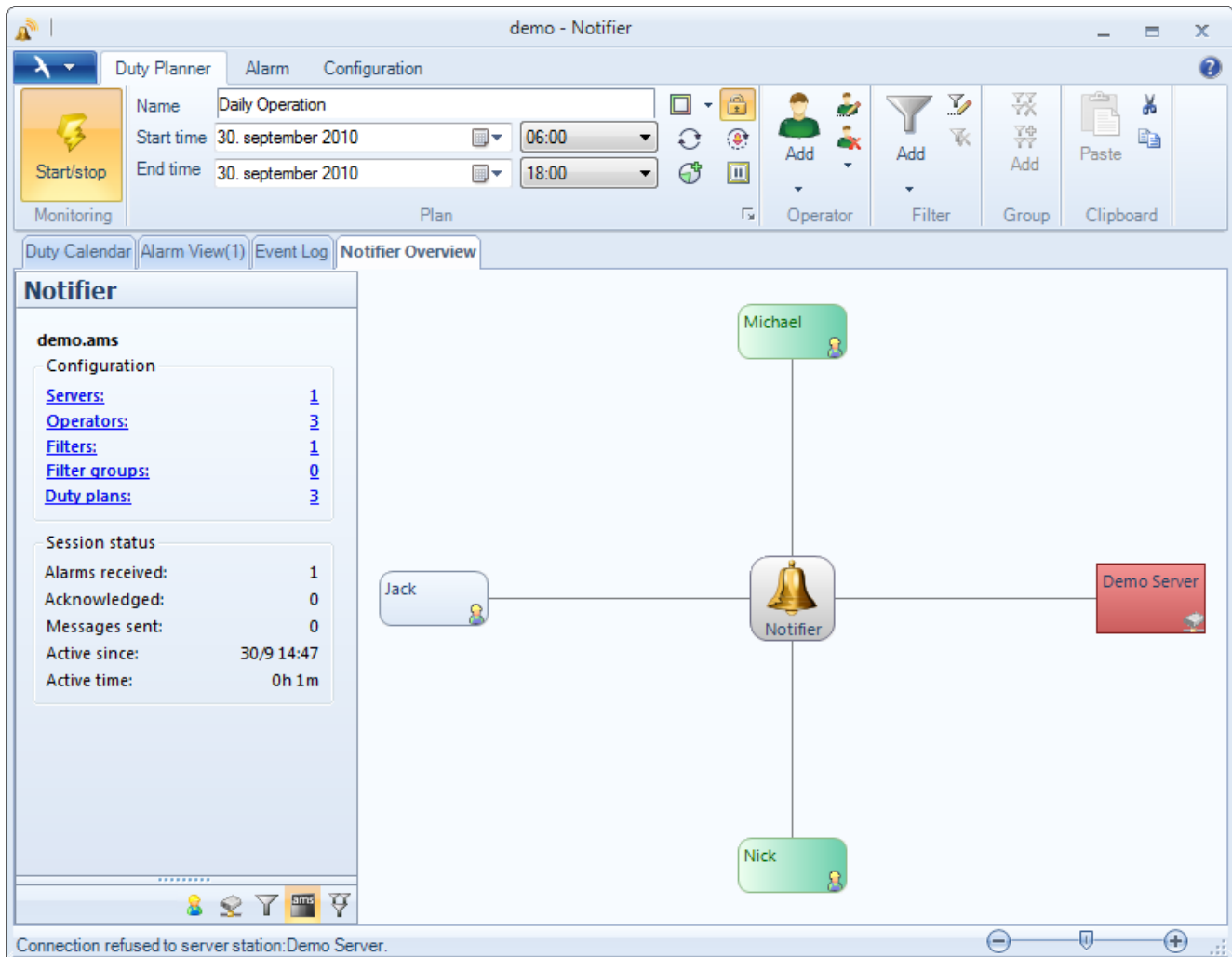
Clear event log window Open file log folder Search: Clear

- 13. maj 2008 09:47:54 Alarm monitoring started. Check interval: 60 sec.
- 13. maj 2008 09:48:07 Notice: Modem has not been enabled. SMS messages will not be sent or received.
- 13. maj 2008 09:48:07 Notice: E-mail service has not been enabled. E-mail messages will not be sent.
- 13. maj 2008 09:48:07 Connecting to server station: Plant server, hostname: localhost
- 13. maj 2008 09:48:16 Station: Plant server filters alarm: 212 - q1 in Global
- 13. maj 2008 09:48:16 Station: Plant server raises new alarm: 95 - System in Global
- 13. maj 2008 09:48:55 Connecting to server station: Plant server, hostname: localhost
- 13. maj 2008 09:48:58 Station: Plant server filters alarm: 212 - q1 in Global
- 13. maj 2008 09:49:55 Connecting to server station: Plant server, hostname: localhost
- 13. maj 2008 09:49:56 Station: Plant server filters alarm: 212 - q1 in Global

Alarm_monitoring running

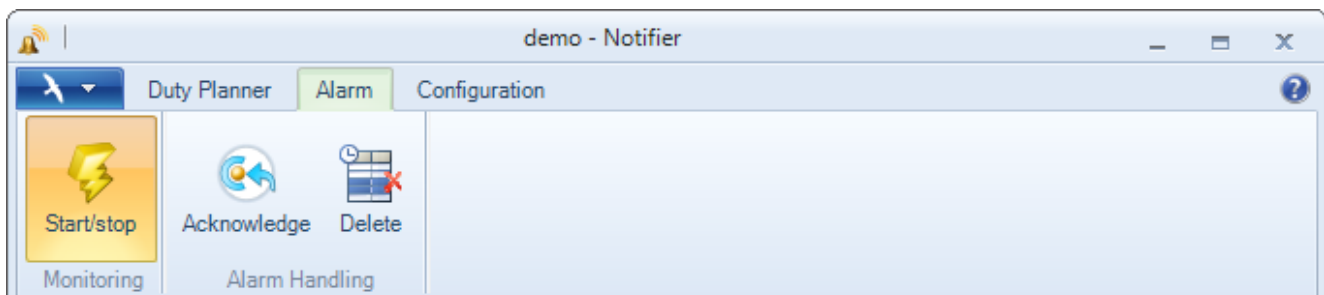
Notifier Overview

This view provides you with an overview of the **Notifier** configuration and how the different elements are associated.



2.3 Ribbon Walkthrough

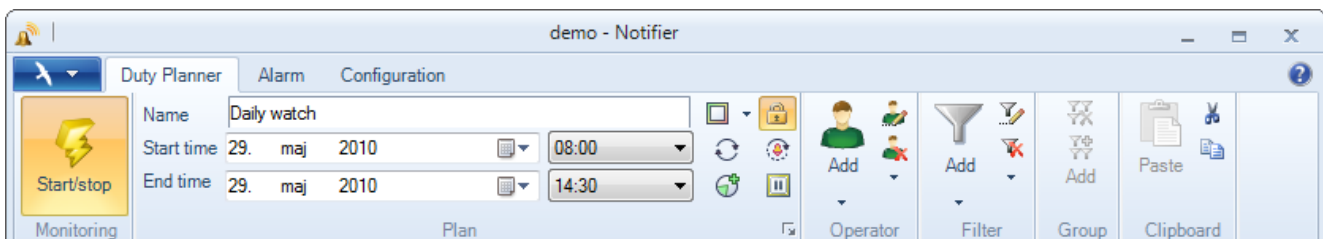
Alarm ribbon



Field Help

Fields	Description
Start/stop	Starts/stops the alarm managing process.
Acknowledge	Acknowledges the selected alarm(s) from the alarm list. <div style="border: 1px solid gray; padding: 5px; margin: 5px 0;">Notice the change in color when an alarm is acknowledged.</div>
Delete	Deletes the selected alarm(s) from the alarm list.

Duty Planner ribbon



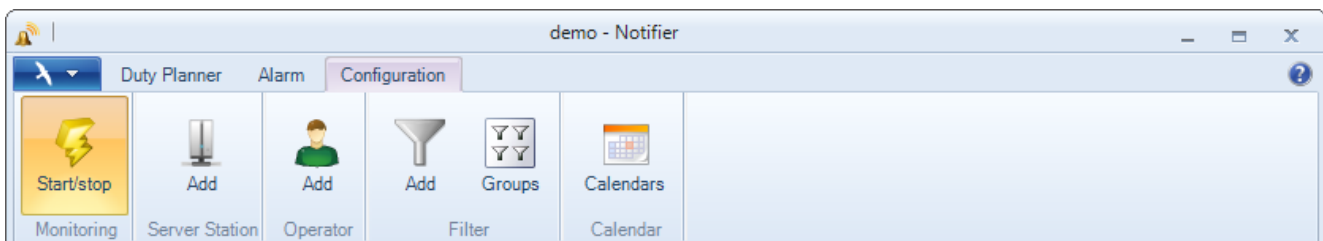
Field Help

Fields	Description
Start/stop	Starts/stops the alarm managing process.
Name	The name field when creating new duty plans. The default name is "New duty" but this can be changed at any time.
Start time	The start date and time of a selected duty plan ¹ .
End time	The end date and time of a selected duty plan.
Set label color	Here you can change the frame color for duty plans.
Lock current duty	Locks the currently selected duty plans. This prevents further editing until it is unlocked again.
Define recurrence	Allows you to duplicate duty plans through a period. More info?
Cycle alarms to primary	When enabled, alarms will be sent out to the primary operator in cycles as defined in Notifier options . More info?
Create duty plan	Creates a new duty plan with the currently typed name and start/end time.
Pause duty plan	Temporarily stops Notifier from forwarding any alarms for the

¹A time block that shows which operators that are on duty in the given time period.

Fields	Description
	selected duty plan. Click again to resume the duty plan and continue normal operation.
Add operator	Shows a list of available operators that you can add to the currently selected duty plan.
Edit/Create operator	Opens the Operator profile dialog box, where you can edit new or existing operators.
Remove operator	Shows a list of currently assigned operators that you can remove from the selected duty plan.
Add filter	Shows a list of available filters that you can apply to the currently selected duty plan.
Edit/Create filter	Opens the Filter Setup dialog box where you can edit existing filters or create new ones.
Remove filter	Shows a list of currently applied filters that you can remove from the selected duty plan.
Add group	Shows a list of available filter groups, that you can add to the currently selected duty plan. More info?
Remove group	Here you can remove a filter group from the currently selected duty plan.
Copy duty	Copies the selected duty plan.
Cut duty	Cuts out the currently selected duty plan for pasting somewhere else.
Paste duty	Inserts a copied or cut duty plan.

Configuration Ribbon



Field Help

Fields	Description
Start/stop	Starts/stops the alarm managing process.
Add Server Station	Opens the Server Configuration dialog box, where new servers can be added to the system.
Add Operator	Opens the Operators profile dialog box, where new operators are added.

Fields	Description
Add Filter	Opens the Filter Setup dialog box, where new filters are defined.
Manage Filter Groups	Opens the Filter Group Setup dialog box, where new filter groups are created.
Calendars	Opens the Calendars dialog box, where you can create additional calendars.

Chapter 3: Requirements for Using Notifier

3.1 Enable alarm to Notifier in the Definition module

Alarm communication between **IGSS** and **Notifier** takes place through a TCP/IP connection.

In order for the Notifier server to receive alarms from IGSS, each alarm must be configured individually to be forwarded to the Notifier server. This allows you to control which alarms should be sent to the Notifier server and which alarms should not.

The **to Notifier** check box in the **Edit Alarm Description** form must be selected for the alarm to be forwarded. This check box is cleared by default for all existing and new alarms in IGSS.

If no alarms are configured to be forwarded to the Notifier server, none will be received or displayed.

To enable alarm forwarding to Notifier

Make sure the **IGSS Master** is in Design Mode. If the **IGSS Master** is in Runtime mode, you can change modes by clicking **Application Menu > Design mode** in the **IGSS Master**.

1. In the **IGSS Master**, click **Design and Setup** tab > **Definition** button to open the **Definition** form.
2. In the **Definition** form, click **Edit > Alarm texts** to open the **Alarm Details** form.
3. In the **Alarm Details** form, select the alarm you want to be forwarded to Notifier.
4. Click the **Edit** button to open the **Edit Alarm Description** form.
5. In the **Edit Alarm Description** form, select the **to Notifier** checkbox and click the **OK** button.
6. In the **Alarm Details** form, click the **Close** button to close the **Alarm Details** form.

See Also

"Setting up System Configuration Parameters" on page 11

3.2 Setting up System Configuration Parameters

In order to receive and acknowledge alarms from IGSS, the Notifier server must have access the IGSS server. If the Notifier server cannot access the IGSS server, alarms will not be passed on to Notifier from IGSS.

Notifier access to the IGSS server is set up in the **System Configuration** form in the **IGSS Master**.

You can also edit existing Notifier server users, changing their user names and passwords as well as removing them from the IGSS server. If you change or remove an existing Notifier server user name or password, Notifier servers that still use the old user name and password will not be able to access IGSS and receive alarms.

To set up Notifier access to IGSS

Make sure the **IGSS Master** is in Design Mode. If the **IGSS Master** is in Runtime mode, you can change modes by clicking **Application Menu > Design mode** in the **IGSS Master**.

1. In the **IGSS Master**, click **Design and Setup** tab > **System Configuration** button to open the **System Configuration** form.
2. In the **System Configuration** form, click the **Access Control > Notifier and Super Alarm server settings** group > **Add** button to open the **User Name and Password** dialog.
3. In the **User name** field, enter the user name which Notifier will use to access IGSS
4. In the **Password** field, enter the password for the Notifier user name
5. Click the **OK** button to save the settings and exit the **User Name and Password** dialog.
6. In the **Access Control** tab, in the **Notifier and Super Alarm server settings** group > **TCP/IP port** field, enter the TCP/IP address and port number the Notifier server is to use to access the IGSS server.
7. Click **File > Exit** to exit the **System Configuration** form.

You can set up multiple Notifier server users and passwords if this is required.

To edit an existing Notifier server user

Make sure the **IGSS Master** is in Design Mode. If the **IGSS Master** is in Runtime mode, you can change modes by clicking **Application Menu > Design mode** in the **IGSS Master**.

1. In the **IGSS Master**, click **Design and Setup** tab > **System Configuration** button to open the **System Configuration** form.
2. In the **System Configuration** form, in the **Access Control > Notifier and Super Alarm server settings** group, select the Notifier server user you want to edit and click the **Edit** button to open the **User Name and Password** dialog.
3. In the **User name** field, enter the new user name which Notifier will use to access IGSS
4. In the **Password** field, enter the password for the new Notifier user name
5. Click the **OK** button to save the settings and exit the **User Name and Password** dialog.
6. In the **Access Control** tab, in the **Notifier and Super Alarm server settings** group > **TCP/IP port** field, enter the TCP/IP address and port number the Notifier server is to use to access the IGSS server.
7. Click **File > Exit** to exit the **System Configuration** form.

To remove an existing Notifier server user

Make sure the **IGSS Master** is in Design Mode. If the **IGSS Master** is in Runtime mode, you can change modes by clicking **Application Menu > Design mode** in the **IGSS Master**.

- In the **IGSS Master**, click **Design and Setup** tab > **System Configuration** button to open the **System Configuration** form.
- In the **System Configuration** form, in the **Access Control > Notifier and Super Alarm server settings** group, select the Notifier server user you want to remove and click the **Remove** button.

3.3 Planning your Notifier monitoring system

The **Notifier** module is the "collection point" for all the alarms in the plants for which your unit or organization has responsibility. This can be just one plant or many, but no matter what the number, it's a good idea to begin by sketching out how you want to organize alarm monitoring with **Notifier**.

Depending on the number of plants and the size of the staff, you want to ensure that all monitoring situations have been taken into account. During normal working hours, you might choose to have some or all the alarms acknowledged from **Notifier** itself. After normal working hours, you could choose to have all alarms forwarded as text messages to the mobile phones of duty personnel. By use of alarm filtering in **Notifier**, you may, for example, designate specific alarms to be handled by specific duty personnel, which from an overall perspective ensures the best use of resources under given conditions.

3.4 GSM modem connection

There are two basic ways to set up alarm communication with **Notifier**:

- Alarms are acknowledged in **Notifier**.
- Alarms are forwarded as text messages to mobile phones and are acknowledged from there.

These two basic ways to use **Notifier** will normally be combined to give greater flexibility in monitoring activities. In the second case where alarms are forwarded, a **GPS modem is required**.

Note that in order to use the second option an extended license for **Notifier** is needed.

Chapter 3: Setting up Notifier

3.5 Setting the baud rate on modems

The default baud rate is set to 9600 for the Notifier module, but some modems do not support this speed rate.

You can change the communication speed to the port by editing the System Registry for the AMS Server, creating a new registry key called BaudRate and using the BaudRate registry key to set the baud rates.

The following Baud rates are supported by the majority of serial ports:

- 110
- 600
- 2400
- 9600
- 19200
- 38400
- 57600
- 300
- 200
- 4800
- 14400
- 28800
- 56000
- 115200

To create a new BaudRate registry key

1. Open the **Registry Editor** form on the local machine. Click **Start** and type "Regedit.exe" in the search field of the Windows Start menu.
2. In the **Settings** folder found in HKEY_CURRENT_USER\Software\7-Tech-technologies\IGSS32\V9.00.00\AMS, right-click in the right pane and select **New** > **String Value**.
3. In the **Name** column, type "BaudRate" and press **Enter** to create the new key.
4. Click **File** > **Exit** to exit the **Registry Editor** form and save the registry values.

To change the values of the BaudRate registry key

1. Open the **Registry Editor** form on the local machine. Click **Start** and type "Regedit.exe" in the search field of the Windows Start menu.
2. In the **Settings** folder in HKEY_CURRENT_USER\Software\7-Tech-technologies\IGSS32\V9.00.00\AMS, right-click on the **BaudRate** key and select **Modify**.
3. In the **Value Data** field of the **Edit String** form, enter the new value of the BaudRate string and click **OK** to save.
4. Click **File** > **Exit** to exit the **Registry Editor** form and save the registry values.

3.6 Enable/Disable Notifier interface

The IGSS server is by default configured to enable interfacing and alarm forwarding to Notifier servers, but you can change this setting, disabling all alarm forwarding to all Notifier servers from the IGSS server.

To disable Notifier interface

Make sure the **IGSS Master** is in Design Mode. If the **IGSS Master** is in Runtime mode, you can change modes by clicking **Application Menu > Design mode** in the **IGSS Master**.

1. In the **IGSS Master**, click **Design and Setup** tab > **System Configuration** button to open the **System Configuration** form.
2. In the **System Configuration** form, click the **Access Control** tab.
3. Select the **Disable Notifier interface** check box in the **Notifier and Super Alarm server settings** group
4. Click **File > Exit** to exit the **System Configuration** form.

3.7 Access Control

Protecting Notifier from accidental shut-down

If the Notifier module is closed, either deliberately or by accident, Notifier monitoring will be stopped and all subsequent notifications will no longer be sent to the recipients specified in the duty plans.

It is fairly easy to accidentally shut-down the Notifier form and operators can do this by simply closing the Notifier form, clicking the **Exit Notifier** button in the **Application Menu** or by clicking the Close icon in the upper-right hand corner of the Notifier form.

You can prevent accidental shut-down of the Notifier module by specifying a password which a user must enter in order to close the Notifier module.

In order to set up the Notifier shut-down password protection, you must create a new Notifier registry key called ActionRequirePassword and thereafter define the password in the registry.

To create a new registry key

1. Open the **Registry Editor** form on the local machine. Click **Start** and type "Regedit.exe" in the search field of the Windows Start menu.
2. In the **Settings** folder found in HKEY_CURRENT_USER\Software\7-Tech-technologies\IGSS32\V9.00.00\AMS, right-click in the right pane and select **New > String Value**.
3. In the **Name** column, type "ActionRequirePassword" and press **Enter** to create the new key.
4. Click **File > Exit** to exit the **Registry Editor** form and save the registry values.

To change the values of the ActionRequiredPassword registry key

1. Open the **Registry Editor** form on the local machine. Click **Start** and type "Regedit.exe" in the search field of the Windows Start menu.
2. In the **Settings** folder in HKEY_CURRENT_USER\Software\7-Tech-nologies\IGSS32\V9.00.00\AMS, right-click on the **Action RequiredPassword** key and select **Modify**.
3. In the **Value Data** field of the **Edit String** form, enter the new value of the Action-RequiredPassword string and click **OK** to save.
4. An empty ActionRequiredPassword string is equal to no password protection for closing the Notifier form.
5. Click **File > Exit** to exit the **Registry Editor** form and save the registry values.

Protecting Notifier from unauthorized use

Introduction

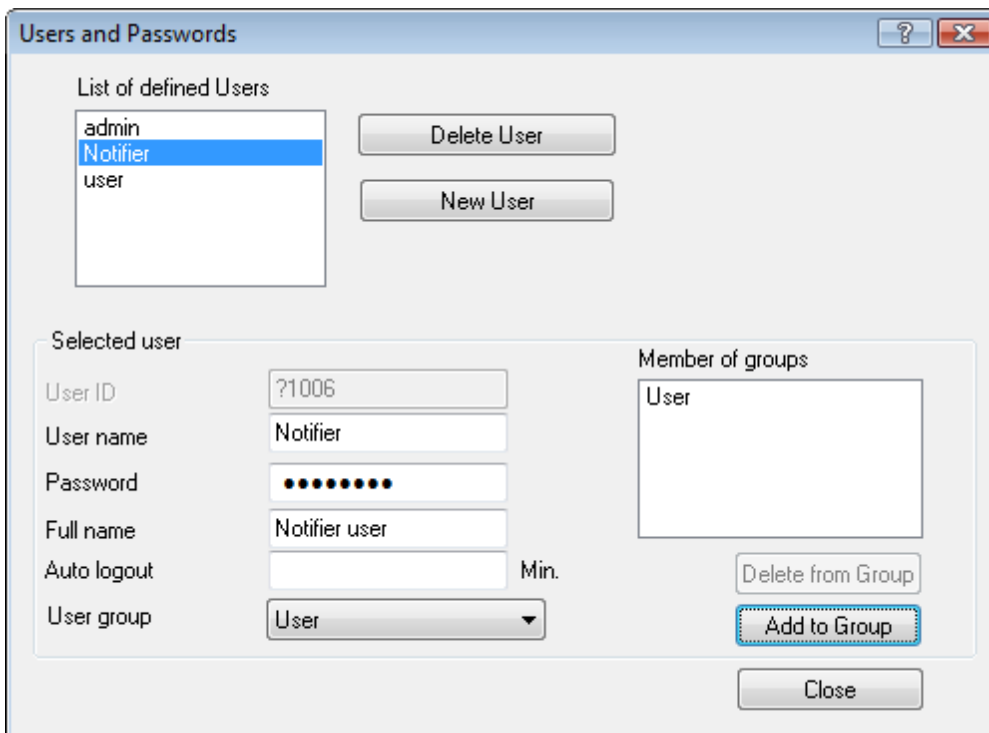
If you want to make sure that **Notifier** operators are not allowed to, for example, send digital commands, change alarm limits, acknowledge alarms, then this can be controlled with a special user created in **User Administration**.

This functionality is relevant if you want to protect critical functions in your plant, when you are using the [Remote Control](#) functionality in **Notifier**.

Procedure

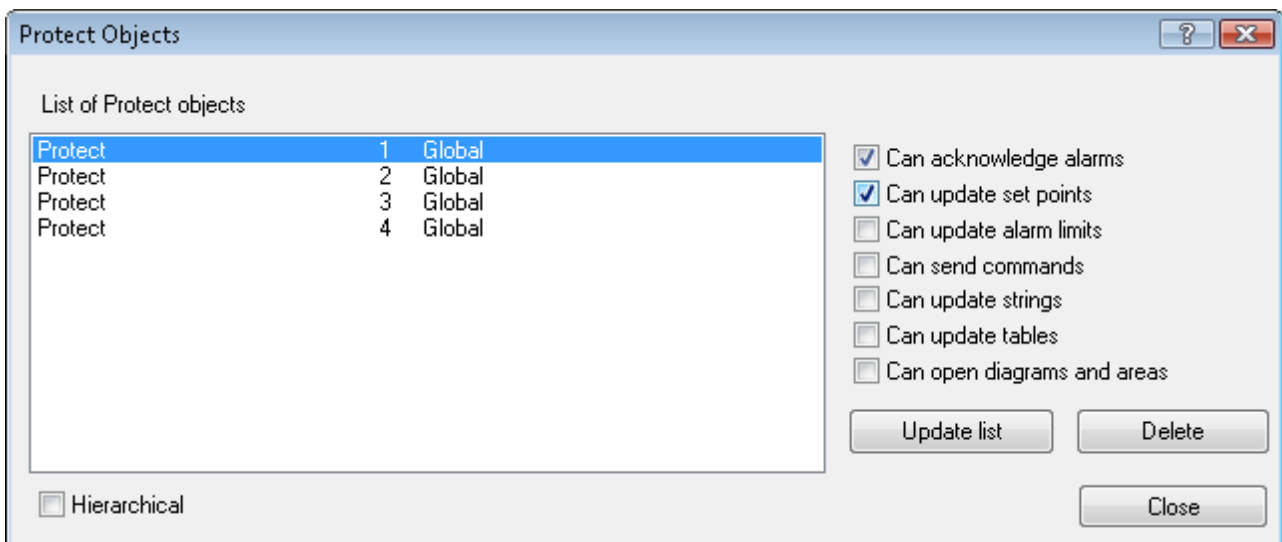
To protect certain functions from being used by operators, do the following:

1. Set up the relevant user groups, users and user privileges in the **User Administration** module. Follow the guidelines in the User Administration help file.
2. Create a new user with the name "Notifier".



3. Add the Notifier user to the relevant user group.

The privileges of the Notifier user will thus be the privileges assigned to this user group. In this case, the Notifier user can only acknowledge alarms and update set points.



4. Close the **User Administration** module.
5. Stop and restart IGSS to make the changes effective.
6. Try sending a command from a cell phone to **Notifier** and check that it is either carried out or rejected according to the user setup.

Removing Notifier functionality

You can remove access to the Notifier form's functionality, removing complex features that an operator or end-user might not need and simplifying the Notifier form for the operator.

The reduced access to Notifier functionality will affect all operators of the machine and is not connected to any other IGSS user account and security setup.

If you want to remove access to functionality, you must first create a new registry key called **CalendarMode** in the registry of the local machine. After you have created the **CalendarMode** registry key, you can set the value of the **CalendarMode** key to restrict the operator's access to Notifier functionality.

CalendarMode String values

string value	Description
0	The operator may access to all Notifier menus, functionality and features.
1	The operator may only create and edit existing duty plans . Access to Notifier options , the Alarm tab and the Configuration tab is disabled. Furthermore, access to the Alarm View , Event Log and Notifier Overview tabs on the Duty Planner tab is disabled. The operator may not start or stop the Notifier functionality.
2	The operator may: <ul style="list-style-type: none"> • create and edit the duty plans • create and edit operators • add and remove operators to duty plans • cycle alarms to the primary operator • create and edit filters. Access to Notifier options, the Alarm tab and the Configuration tab is disabled. Furthermore, access to the Alarm View , Event Log and Notifier Overview tabs on the Duty Planner tab is disabled. The operator may not start or stop the Notifier functionality.
3	The operator may only add and remove existing operators to existing duty plans. Access to Notifier options, the Alarm tab and the Configuration tab is disabled. Furthermore, access to the Alarm View , Event Log and Notifier Overview tabs on the Duty Planner tab is disabled. The operator may not start or stop the Notifier functionality.

To create a new CalendarMode registry key

1. Open the **Registry Editor** form on the local machine. Click **Start** and type "Regedit.exe" in the search field of the Windows Start menu.
2. In the **Settings** folder found in HKEY_CURRENT_USER\Software\7-Tech-nologies\IGSS32\V9.00.00\AMS, right-click in the right pane and select **New > String Value**.
3. In the **Name** column, type "CalendarMode" and press **Enter** to create the new key.
4. Click **File > Exit** to exit the **Registry Editor** form and save the registry values.

To change the values of the CalendarMode registry key

1. Open the **Registry Editor** form on the local machine. Click **Start** and type "Regedit.exe" in the search field of the Windows Start menu.
2. In the **Settings** folder in HKEY_CURRENT_USER\Software\7-Tech-nologies\IGSS32\V9.00.00\AMS, right-click on the CalendarMode key and select **Modify**.
3. In the **Value Data** field of the **Edit String** form, enter the new value of the CalendarMode string and click **OK** to save.
4. Click **File > Exit** to exit the **Registry Editor** form and save the registry values.

Chapter 4: Using Notifier

4.1 How to open the Notifier module

The **Notifier** module can be opened in the IGSS **Master** module from the **Design and setup** tab) when in Design mode and on the **Home** tab when in Runtime mode (project needs to be running).

Start up process

When the **Notifier** program is used, we recommend you to automatically start the program when the IGSS project is started. This can be set up from the **System Configuration** module. Another recommendation is to configure **Notifier** to automatically start the alarm monitoring process when the **Notifier** project is loaded.

For more info on startup processes, see the **Configuration** settings under Personalize (page 51).

4.2 Auto Save Option

Changes to the Notifier module are not automatically saved to the server. The operator must select the **Notifier Application menu > Save** in order to save any changes to the server that may have been made in the Notifier module.

In order to ensure that any changes made on operator stations are saved to the server , you can enable automatic saving of changes in the Notifier calendars by using the registry key string value AutoSave.

If you want to enable automatic saving of Notifier changes, you must first create a new registry key called **AutoSave** in the registry of the local machine. After you have created the **Autosave** registry key, you can set the value to enable automatic saving of Notifier changes.

- If the value of the AutoSave registry key is set to "1", the Notifier module on operator station will be scanned for changes every 30 seconds. Any detected changes will automatically be saved to the server.
- If the of the AutoSave registry key is set to "0", the AutoSave functionality is disabled and the operator must select the **Notifier Application menu > Save** in order to save any changes to the server that may have been made in the Notifier module once again.

To create a new AutoSave registry key

1. Open the **Registry Editor** form on the local machine. Click **Start** and type "Regedit.exe" in the search field of the Windows Start menu.
2. In the **Settings** folder found in HKEY_CURRENT_USER\Software\7-Tech-technologies\IGSS32\V9.00.00\AMS, right-click in the right pane and select **New > String Value**.
3. In the **Name** column, type "Autosave" and press **Enter** to create the new key.
4. Click **File > Exit** to exit the **Registry Editor** form and save the registry values.

To change the values of the AutoSave registry key

1. Open the **Registry Editor** form on the local machine. Click **Start** and type "Regedit.exe" in the search field of the Windows Start menu.
2. In the **Settings** folder in HKEY_CURRENT_USER\Software\7-Tech-nologies\IGSS32\V9.00.00\AMS, right-click on the **AutoSave** key and select **Modify**.
3. In the **Value Data** field of the **Edit String** form, enter the new value of the AutoSavestring and click **OK** to save.
4. Click **File > Exit** to exit the **Registry Editor** form and save the registry values.

4.3 Getting Started

Getting started guide

The four pages below guides the new user through the basic concepts of creating the first **Notifier** configuration. When successfully completed, **Notifier** will be able to receive alarms from IGSS and forward them to assigned plant operators. These steps will not include special options such as filters, multiple calendars or recurrence functions. For more info on these options, refer to the other topics in the help file.

Let's get started. Click the first link to begin the guide. "Setting up System Configuration Parameters" on page 11

1. Create a duty calendar (page 21).
2. Create and add operators to duty calendars (page 26).
3. Server connection to IGSS (page 29).
4. Link alarms to mobile phones or e-mails (page 30).

Create a duty calendar

These steps will guide you through how to create a **duty calendar**¹.

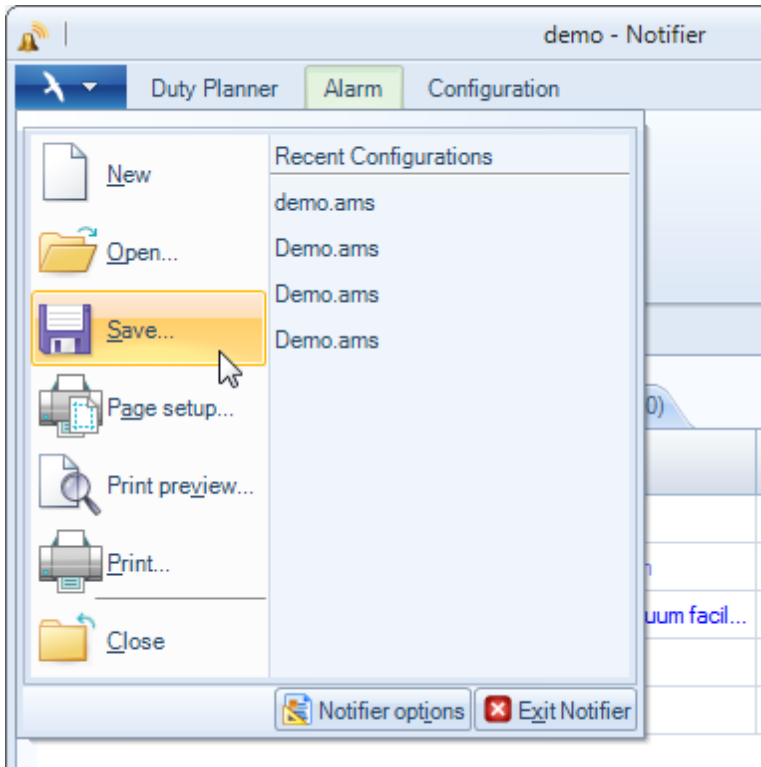
Creating a Notifier configuration

When **Notifier** is started for the first time, a new **Notifier** configuration file must be created in order to use this program.

To name and save an Notifierconfiguration file

¹A calendar which contains the duty plans.

1. Click on the **Notifier** application button and click on **Save**. The **Save Notifier Configuration** dialog box appears.
2. The default name of the **Notifier** configuration is "No title.ams" and the default location is the IGSS project **report folder**. These settings may be changed if required.



When an **Notifier** configuration is run the first time a backup file of the configuration will be created and saved in the default folder.

Creating and naming a duty plan¹

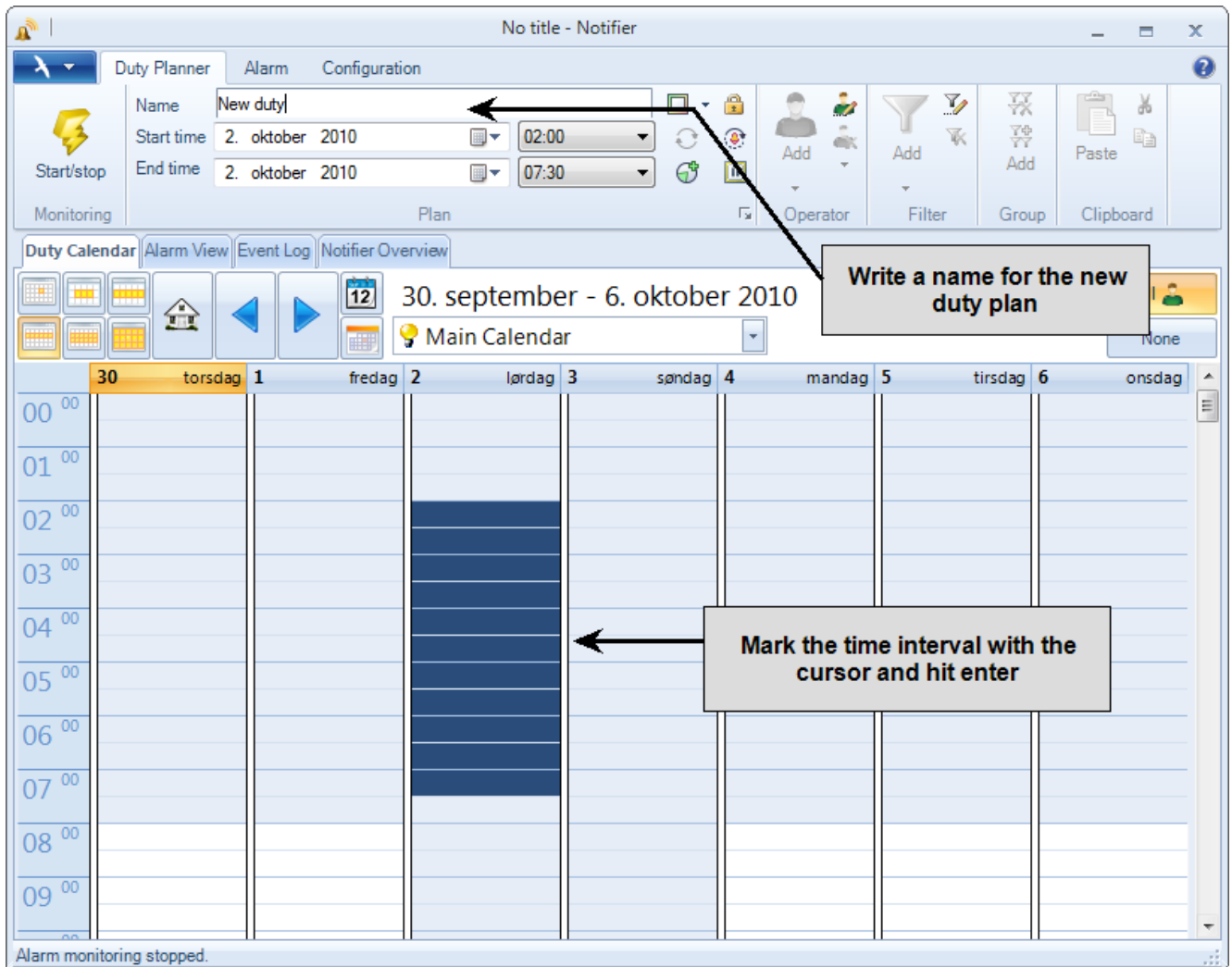
In **Notifier**, it is the duty plans which are the basis for determining the operators' responsibilities during alarm monitoring. Each duty plan determines the start time, the end time and the total hours of monitoring. The minimum time interval for a single duty plan on the calendar is ½ hour.

To create a new duty plan

1. Go to the **Duty Calendar** view.

¹A time block that shows which operators that are on duty in the given time period.

2. Use the cursor to mark up a time interval and press enter. The duty plan is now added and shown in the calendar.
3. In the **Duty Planner** ribbon, type the name you want for this duty in the **Name** field. The name is now displayed at the top of the duty in the calendar.
4. After creating the duty plan, you can manually choose the time interval in the **Start time** and **End time** fields.



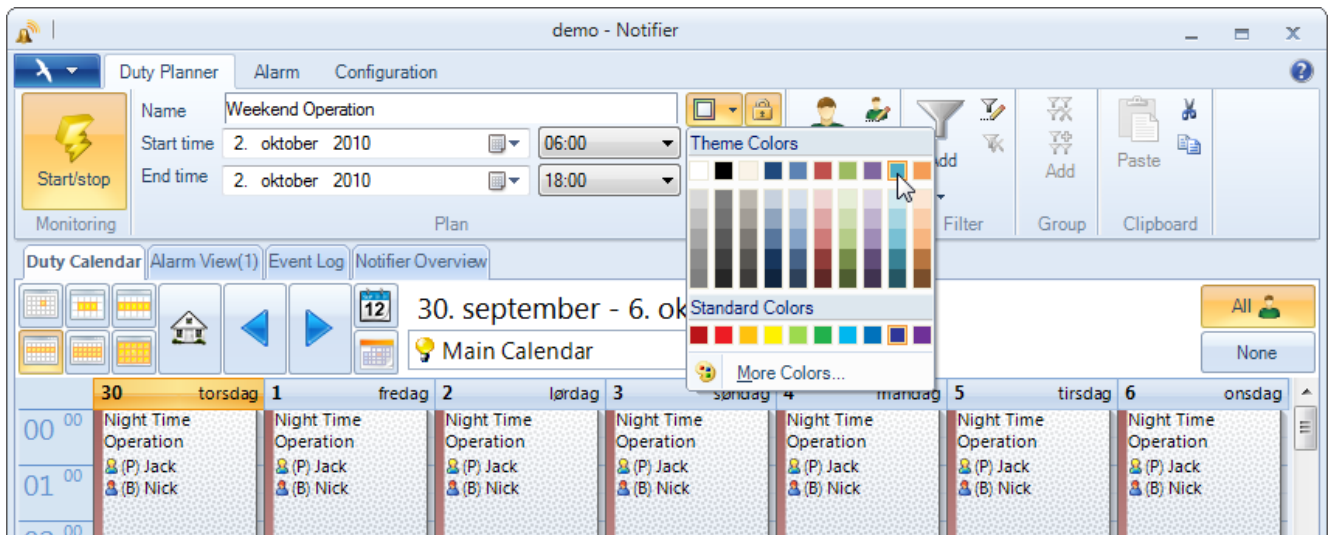
When creating a calendar with the same duty plan repeating itself periodically, instead of typing in the duty every time it should appear it's quicker to use the **Recurrence** function. More info?.

Select a new color for a duty plan frame

If we work with many different duty plans in a calendar, it might be useful to be able to easily tell them apart on screen by giving them different border colors.

To change the frame color of a duty plan

1. Select your duty plan by clicking on it in the calendar.
2. Go to the **Duty Planner** ribbon, click the drop down arrow on the **Set label color for this duty plan**.
3. Choose the color you want to use and the frame around the block takes on the new color.




An option to avoid crowded and confusing calendars is to use more than one calendar. In this case, you can choose to show only some of the duty plans in each calendar. More info?.

Locking a duty plan

After a duty plan has been added and the desired options have been set, it is recommended that you lock the duty plan to avoid it being accidentally changed or deleted.

To lock a duty plan

1. Select the duty plan in the calendar.
2. Go the **Duty Planner** ribbon and click the **Lock current duty for editing**  button. The area of the selected duty plan is now shown as a shaded grey area and the duty plan is locked from editing. If you want to edit it again, click the **Lock current duty for editing** button once more to unlock the duty plan.

The screenshot displays the 'demo - Notifier' application window. At the top, there are tabs for 'Duty Planner', 'Alarm', and 'Configuration'. The 'Duty Planner' tab is active, showing a form for a duty plan named 'Daily watch' with a start time of 08:00 and an end time of 14:30 on May 29, 2010. A toolbar contains various icons, including a lock icon. A callout box labeled 'Lock/Unlock the duty plan' points to this lock icon.

Below the form is a 'Duty Calendar' view for the period '27. maj - 2. juni 2010'. The calendar shows a grid of days and times. A duty assignment for 'Daily watch' by '(P) Michael' is shown on Friday, May 29th, from 08:00 to 14:30. This assignment is highlighted with a shaded grey background. A callout box labeled 'Notice the change of color to a shaded grey' points to this shaded area.

At the bottom of the window, it says 'Configuration 'demo.ams' loaded'.



Locking prevents moving the time block to another date or changing its time interval, but does **not** prevent adding or removing operators.



We have now created a duty plan. Next we will add an operator to it.

"Create and add operators to duty calendars" on page 26.

Create and add operators to duty calendars

After creating a **duty plan**¹, operators must be assigned to it if you need to forward any of the alarms collected by **Notifier**. These operators will be created and assigned here and will later become the alarm message recipients. Via the text message, an operator receives alarm notification and is then able to reply with an alarm acknowledgement.

To add a new operator profile for your configuration

1. Click the **Add Operator**  button on the **Configuration Ribbon**² or click the **Edit/Create Operator**  button on the **Duty Planner Ribbon**. Both methods will open up the **Operator profile** dialog box.
2. Enter a name for the operator in the **Name** field.
3. Enter a mobile phone number in the **Phone** field.
4. Enter an email address in the **E-mail** field as a supplement or alternative for the phone number (optional).
5. In the **Description** field, you can type in additional information about the operator.
6. Click **Add** to add this operator.
7. Click **Close** to return to the configuration.

¹A time block that shows which operators that are on duty in the given time period.

²The Ribbon is a new term/element in the Microsoft universe. The Ribbon replaces the well-known toolbars in applications. The Ribbon provides quick access to the most commonly used functions in the application. The Ribbon is divided into logical groups (the tabs) and each tab is divided into sections (the blocks in the tab). The Ribbon is context-sensitive which means that only relevant functions are accessible dependent on the current user action.

To create additional operators, don't click the **Close** button but instead overwrite the current operator name in the **Name** field. Then key in the other settings and click **Add** again, which creates and saves the new operator without deleting the overwritten profile.

Filters can also be applied to Operators. More info?

Assigning operators to duty plans

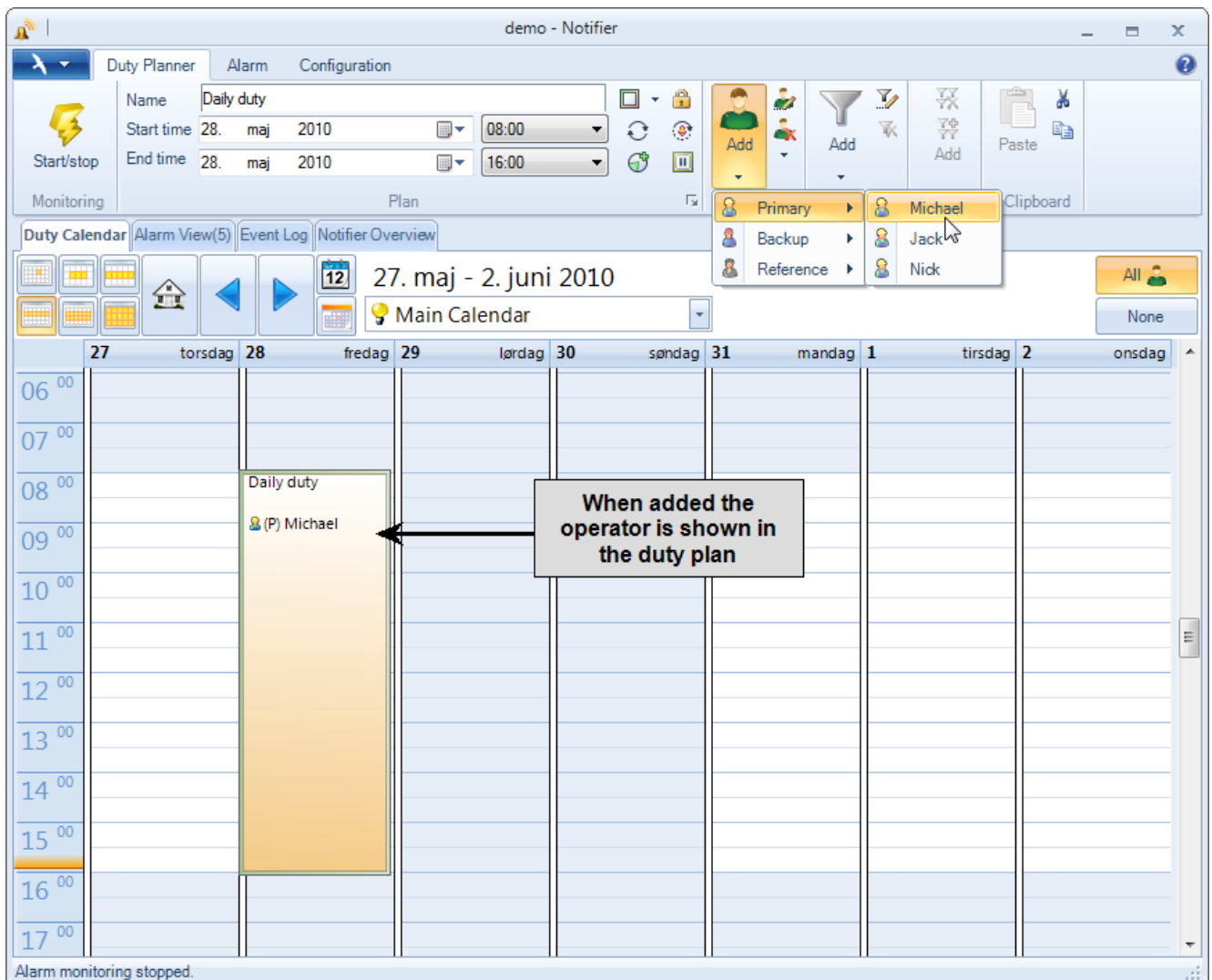
After creating some operators, these can now be assigned to a duty plan so that **Notifier** knows where to send the alarm messages. When adding the operators, there are three different operator roles available:

- Primary operator - This operator will be the first to receive a message from **Notifier**, when an alarm occurs during the duty plan period.
- Backup operator - If the primary operator does not acknowledge the alarm message sent to him within a specified period, the alarm message will be forwarded to the backup operator for him to acknowledge it.
- Reference operator - This operator role is considered to be a supervisory one. If assigned, the operator with this role will receive all text message alarms forwarded by **Notifier**. This role can also be used as a type of alarm logging function, where instead of using a text messaging service to transmit alarms, **Notifier** can be set up to send alarms as e-mails.

If a Reference operator has been added to a duty plan, primary/backup operators will still receive their alarm messages as normal.

To assign an operator to a duty plan

1. Select the duty plan by clicking on it in the **duty calendar**¹.
2. On the **Duty Planner** ribbon, click the **Add Operator** button.
3. Choose the operator role you wish to assign according to the above descriptions.
4. Choose the operator to assign to this duty plan with the given operator role.




Note that each different operator role will have its own operator icon shown in the duty plan.

Alternatively, you can add operators by right-clicking on the duty plan and choosing **Add Operator** from the function menu.

To remove an operator from a duty plan

¹A calendar which contains the duty plans.

1. Select the duty plan in the duty calendar.
2. On the **Duty Planner** Ribbon, click the **Remove Operator**  button and from this list choose the operator you wish to remove from the duty plan.


Now the duty calendar is completed. Next we will set up the communication settings.

"Server connection to IGSS" on page 29.

Server connection to IGSS

Before **Notifier** can forward any alarms to operators, it must be set up to receive alarms from the **SCADA**¹ systems server.

To set up a server for Notifier

1. Go to the **Configuration** ribbon and click the **Add Server Station**  button. The **Server Configuration** dialog box opens.
2. Write the name you want to use for your IGSS server in the **Server station name** field and click the **Add** button.
3. In **Host name**, key in the PC name of the IGSS system's server.
4. In **IP address**, key in the IP address of the IGSS system's server PC.
5. In **Port**, you can typically leave the default setting of 12399. If you choose to use another port number, remember to open the port number in your firewall on your system.
6. Enter the **User name** and **Password** of a valid Notifier user. The Notifier users are defined in the **System Configuration** module.
7. Finish by clicking **Close**. The server is now displayed in the **Notifier** overview **workspace**².

¹Supervisory Control & Data Acquisition

²An area of the screen, similar to the desktop, where all the user tasks are executed, i.e. the duty calendar.

Server Configuration

List of Server stations:

Plant 1 [Delete]

Server station name: Plant 1 [Add]

Server system: IGSS

Connection properties

Host name: \\ localhost

IP address: 127.0.0.1

Port: 12399

Login information

Username: admin

Password: ●●●●

Server filter

Filter: <none> [...]

Description:

Disable [Close]

The last thing to do is to set the GSM modem connection.

Link alarms to mobile phones or e-mails (page 30).

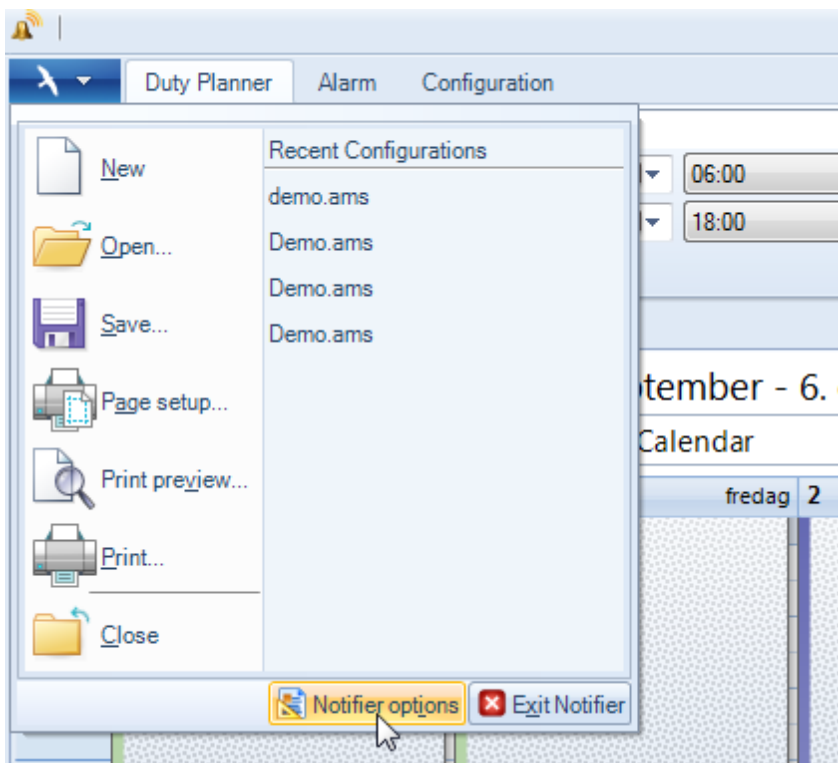
Link alarms to mobile phones or e-mails

With the creation of the **duty plan**¹, the operators and the server the only thing that needs to be done before alarm messages can be forwarded is to set up the GSM modem connection.

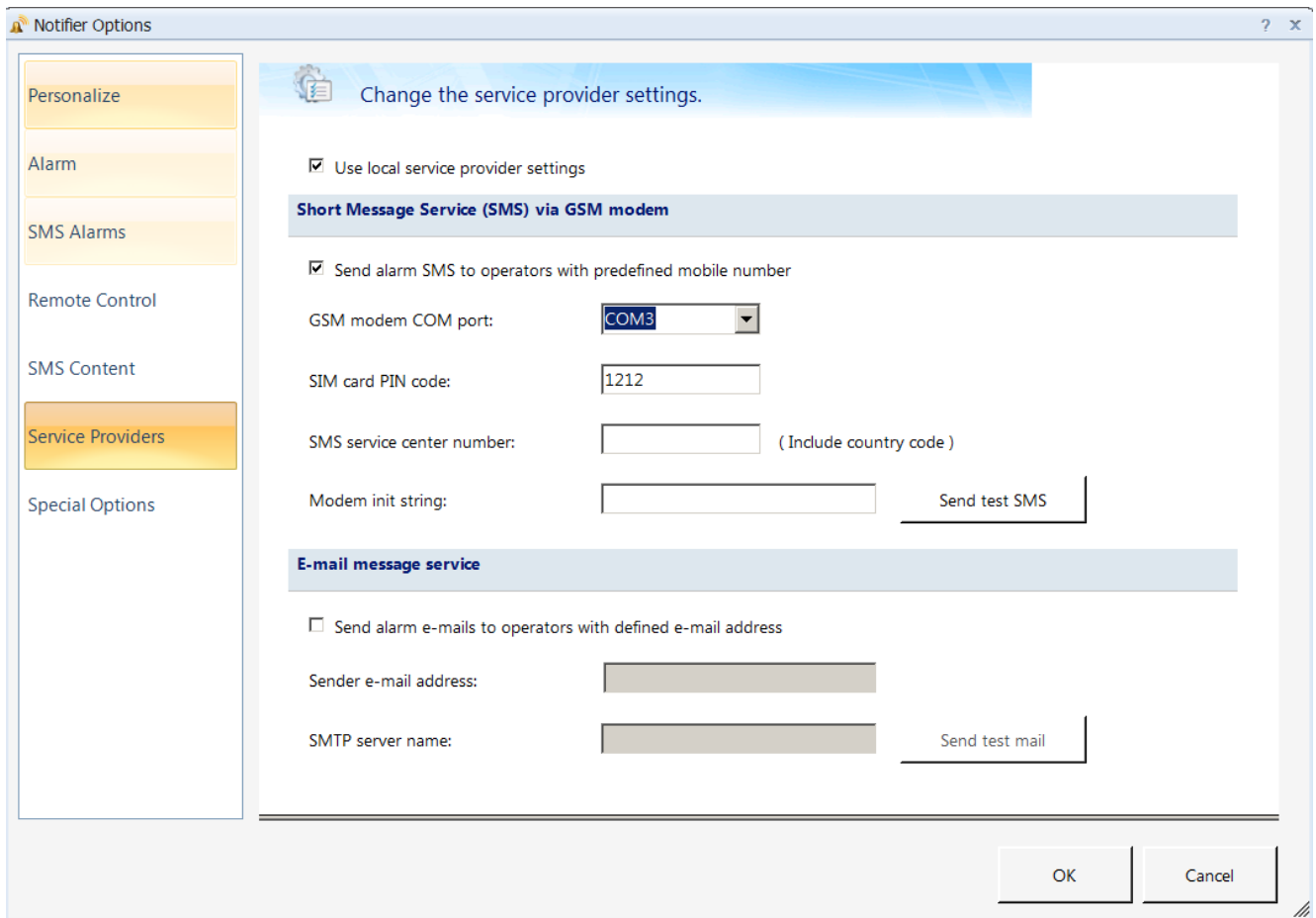
To set up the GSM modem for forwarding alarm text messages

1. Click the application button and choose the **Notifier options** button.

¹A time block that shows which operators that are on duty in the given time period.




2. Click the **Service Providers** tab.



3. In **GSM modem COM port**, choose the appropriate COM port for the modem.
4. In **SIM card PIN code**, type the pin code for the SIM card in the GSM modem.
5. In **SMS service center number**, type in the phone number to the service center of your telecommunications provider. This often comes along with the SIM card.
6. In **Modem init string**, you normally leave the default value.
7. When the modem connection settings have been typed in, you can test them by using the **Send test SMS** button.

If the text message test worked, **Notifier** is now ready for receiving and forwarding alarms to operators.

Simply have your **SCADA**¹ system running and hit the **Start/Stop**  button to initiate **Notifier**.

Congratulations, you have completed your first **Notifier** configuration.

¹Supervisory Control & Data Acquisition


4.4 Recurrence and Calendars

Using recurrence

What is recurrence?

The duty recurrence function allows you to replicate a **duty plan**¹, which repeats itself according to the rules you select. Duty schedules can be quickly replicated across several weeks, months or even years, if required. This saves time and ensures consistency in building extensive duty schedules.

To set up a periodical duty plan using recurrence:

1. Create the duty plan you wish duplicate. Operators/filters etc. can be added immediately, or they can be added later.
2. Select the duty plan in the **duty calendar**².
3. Under the **Duty Planner Ribbon**³, click the **Define Recurrence**  button. The **Duty Recurrence** dialog box opens.
4. Under the **Duty time**, check that the time interval is correct.
5. Under **Recurrence pattern** you choose how often the duty plan should occur, for example all weekdays every second week.
6. Under **Range of recurrence** you set when the recurrence should begin and when it should end.
7. Finish by clicking **OK**. The duty plans are now added to the calendar according to your above settings. Notice that each of the duty plans contains a recurrence icon at the bottom, showing that they are a part of a recurrence.

¹A time block that shows which operators that are on duty in the given time period.

²A calendar which contains the duty plans.

³The Ribbon is a new term/element in the Microsoft universe. The Ribbon replaces the well-known toolbars in applications. The Ribbon provides quick access to the most commonly used functions in the application. The Ribbon is divided into logical groups (the tabs) and each tab is divided into sections (the blocks in the tab). The Ribbon is context-sensitive which means that only relevant functions are accessible dependent on the current user action.

The screenshot shows the 'Duty Recurrence - Duty 1' dialog box. It is divided into three main sections:

- Duty time:** Contains dropdown menus for 'Start' (07:00), 'End' (15:00), and 'Duration' (8 hours). A callout box points to these fields with the text: "Check that the time intervals are as desired".
- Recurrence pattern:** Features radio buttons for 'Daily', 'Weekly', 'Monthly', and 'Yearly'. The 'Weekly' option is selected. Below it, 'Recur every 2 week(s) on:' is followed by checkboxes for 'Monday', 'Tuesday', 'Wednesday', 'Thursday', 'Friday', 'Saturday', and 'Sunday'. A callout box points to these checkboxes with the text: "Choose the days that should have this duty".
- Range of recurrence:** Includes 'Start' (24. april 2008), 'Start time' (00:00), 'End time' (23:59), and radio buttons for 'No end date', 'End after: [] occurrences', and 'End by: 24. juni 2008'. A callout box points to the 'End by' date with the text: "Select when to begin and end the recurrence".

At the bottom of the dialog are three buttons: 'OK', 'Cancel', and 'Remove Recurrence'.

When using recurrence, changes in one of the duty plans will inflict on all the rest of the duty plans from the recurrence.

To quickly find the first duty plan in a recurrence, right-click any of the duty plans in the recurrence, choose **Recurrence** and then select **Go to first**. You are automatically taken to the first entry of the duty plan.

Exception day using recurrence

"Exception days" makes it possible to change the duty plan settings for one day without altering the settings for the whole recurrence series. It is used, for instance, when duty hours need to be altered for a particular day, new operators are required for duty, etc. This might be the case for duty shifts during holidays.

To set an exception day when using recurrence:

1. Find the day where you wish to make an exception from the duty recurrence.
2. Right-click the duty plan for that day, choose **Recurrence** and then **Exception day**. The duty plan is now selected and you can edit it as desired. Notice that the recurrence icon is removed from the bottom and the frame color has changed.

If the duty plan was locked during recurrence, you must unlock the duty plan before you can edit it.

Using the Split function

After having set up duty recurrence through a longer time period, you may later need to make adjustments to your original duty plan. This can be done by using the Split function. This setting separates the original recurrence series into two parts, at the date where Split is enabled. It's similar to the Exception day function, but instead of only affecting one day at a time, Split affects the rest of the recurrence series from the date it's enabled and onward until the end date of the recurrence. The reasons for using Split would be more permanent changes in personnel etc.

To use the Split function:


1. Go to the day in the calendar for which you want to change the duty plans from this day onwards and to the end of the recurrence.
2. Right-click the duty plan, choose **Recurrence** and then **Split**. You can now change your duty plan. Notice that the frame color has changed, but the recurrence icon is still present.

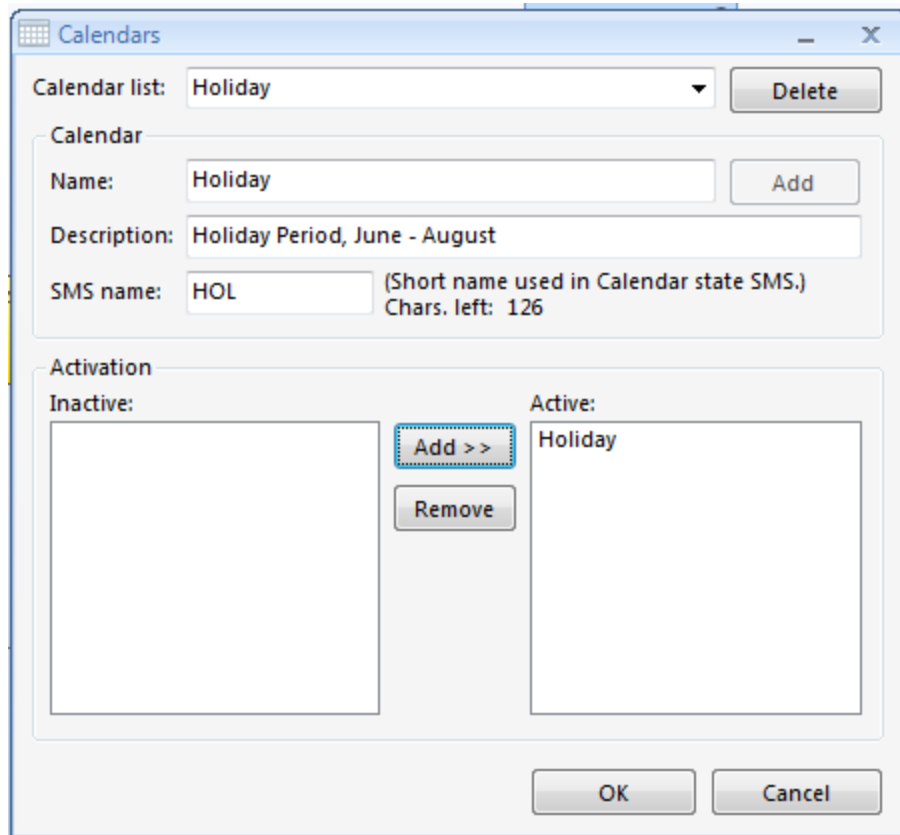
Once you enable Split, it's not possible to undo and return to the original recurrence series. In this case you must first delete the "Split" duty plan from the calendar and then reestablish the original recurrence by opening the Duty Recurrence dialog box and changing the date settings there.

Adding more Calendars

To avoid crowded and confusing calendars, it might be useful to use more than one calendar. In this case, you can choose to show only some of the duty plans in each calendar for a better overview. This also makes it a lot easier to change the calendar "on the fly".

To add new calendars to your configuration:

1. Go to the **Configuration** ribbon and click the **Calendar**  button. The **Calendars** dialog box appears.
2. Enter a name and description for the calendar in the fields as shown below.
3. In **SMS name** you can enter a short name, which is used to activate/deactivate the calendar by sending a text message to **Notifier** with this name.
4. Click the **Add** button to save the new calendar.
5. Finish by clicking **OK** in the bottom.



In order to receive alarms from the new calendar, it has to be moved to the active calendars list. To do this, mark the calendar name in the list and click the add button next to it.

The **Main calendar** always contains all active duty plans for the configuration, but calendars created by the user only contain what is moved to or created in them. See below for how to move duty plans to a calendar.

To move a **duty plan**¹ to a user created calendar :

1. In the calendar, find the duty plan that you wish to move.
2. Right-click the duty plan and choose **Move to** and then select the calendar you wish to move the duty plan to.

Duty plans in user defined calendars will only appear at one place, so when a duty plan is moved from one place to another, it is not shown in the first calendar anymore.

You can toggle between the different calendars in the **Duty calendar** view, from the drop-down list right above the currently displayed calendar.

¹A time block that shows which operators that are on duty in the given time period.

4.5 Filters and Filter Groups

Create and use filters in the duty calendar

Why use filters?

Filters are used to restrict alarm forwarding, primarily to the operators. This is useful to ensure that operators only receive messages on more severe alarms or when action needs to be taken. If no filter is used, then all alarms will be forwarded to the responsible operators.

Where can filters be used ?


Filters can be assigned to the following four "filter points" in **Notifier**:

- the **Notifier** server itself (global filter)
- an IGSS server (alarm source)
- a **duty plan**
- an operator

How to Create Filters

In this example we want to create a filter, that prevents operators from receiving alarms from objects starting with the letter "q".

To create the new filter:


1. Under the **Duty Planner** ribbon, click the **Edit/Create filters**  button to open the **Filter Setup** dialog box.
2. Enter a name for the filter in the **Name** field and click **Add**.
3. Under the **Condition Editor** make the following three selections:
 1. **Property**, should be set to "Object name", since we want the filter to work with the name of objects as parameter.
 2. **Operator**, should be "begins with", since we do not want to filter out an alarm if the object has the letter q, somewhere else in its name, only if it begins with q.
 3. **Value**, is set to q.
4. When these three selections have been made, click **Add Condition**. The condition is now displayed in the list above.
5. Finish creating the filter by clicking **Close**.

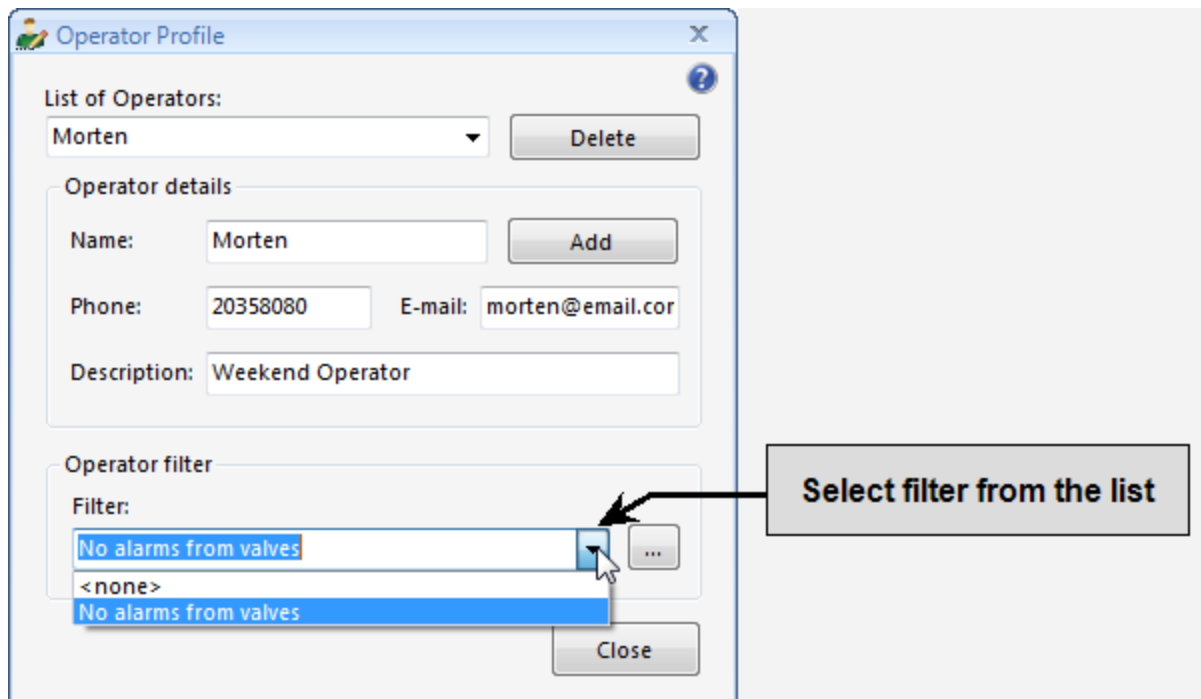
When creating more than one filter at a time, simply overwrite the filter name of the filter you've just created with the new filter name (The overwritten filter has already been saved and is not deleted by this action.).

How to Assign Filters

Here are four examples of how to assign filters to the different kinds of alarm recipients and alarm sources.

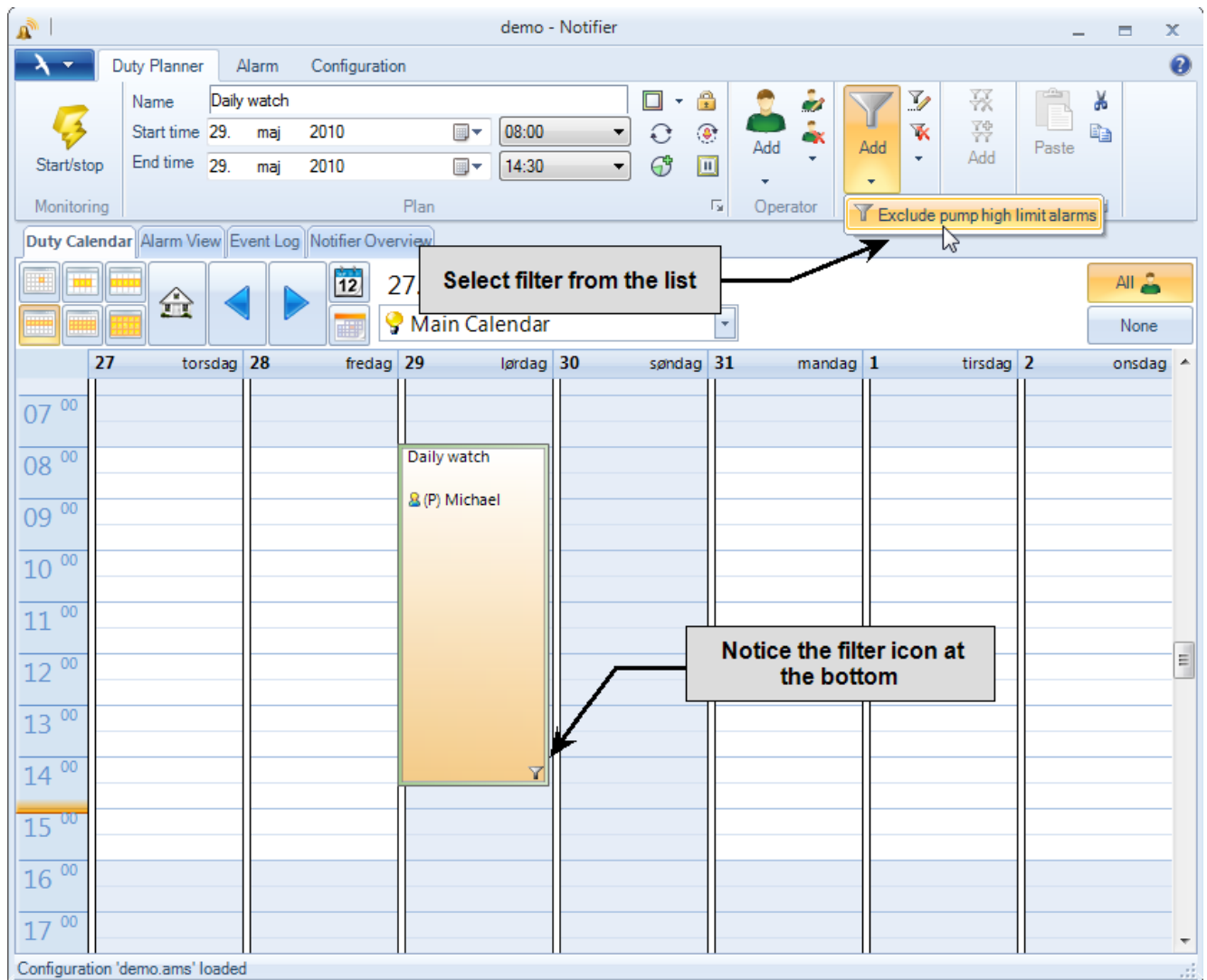
To assign a filter to an operator

1. Open the **Operator Profile** dialog box by clicking the **Edit/Create operator**  button under the **Duty Planner** ribbon.
2. Choose the operator from the **List of Operators**.
3. Under **Operator filter**, choose the filter that you wish to apply for this operator.
4. Finish by clicking **Close**.



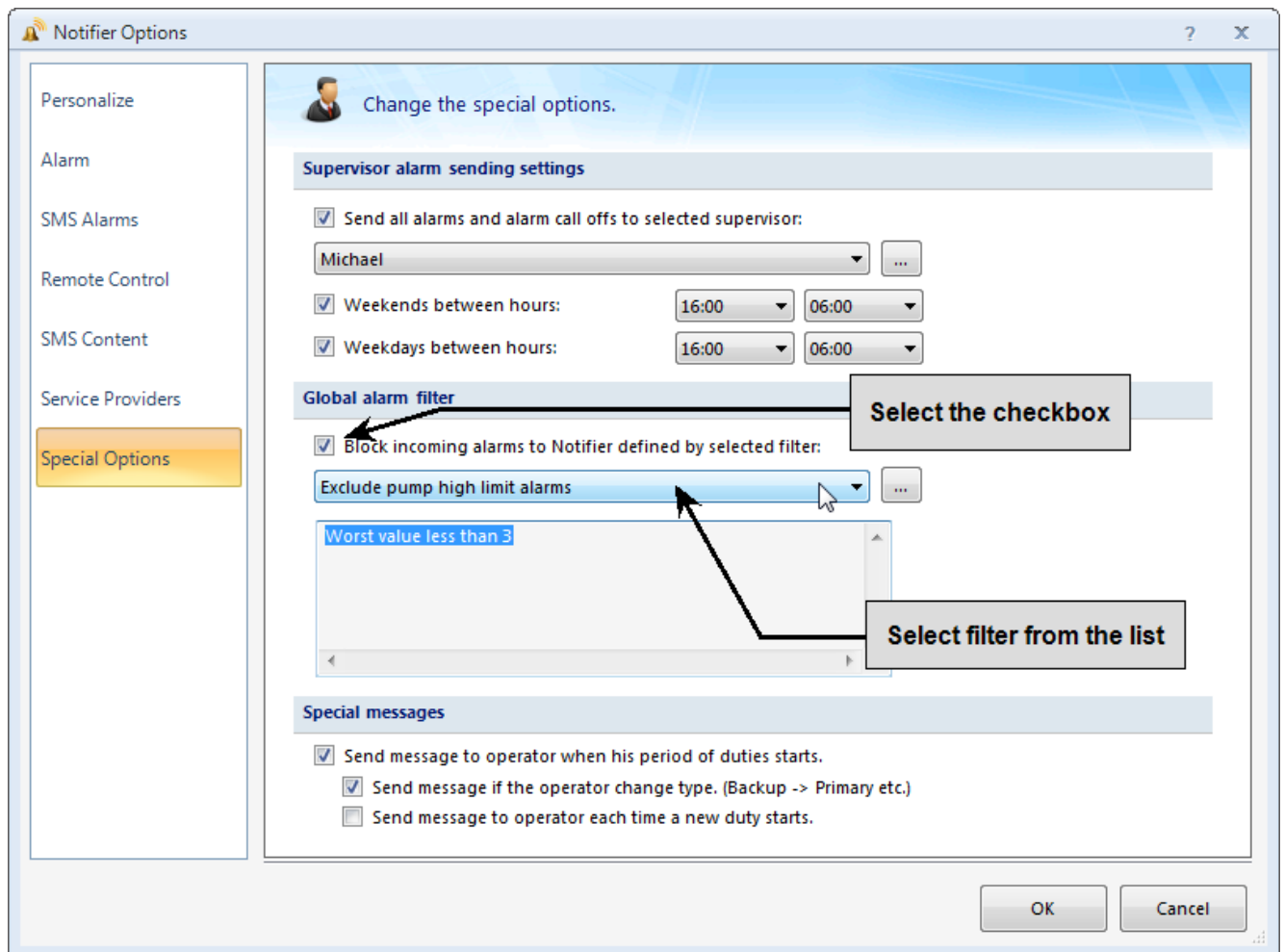
To assign a filter to a duty plan

1. In the calendar, click the duty plan you wish to add a filter to.
2. Then click the **Add Filter** button under the **Duty Planner** ribbon. A list of the existing filters is now shown.
3. Choose the filter that you wish to apply for this duty plan. Notice that a small filter icon now appears at the bottom of the duty plan.




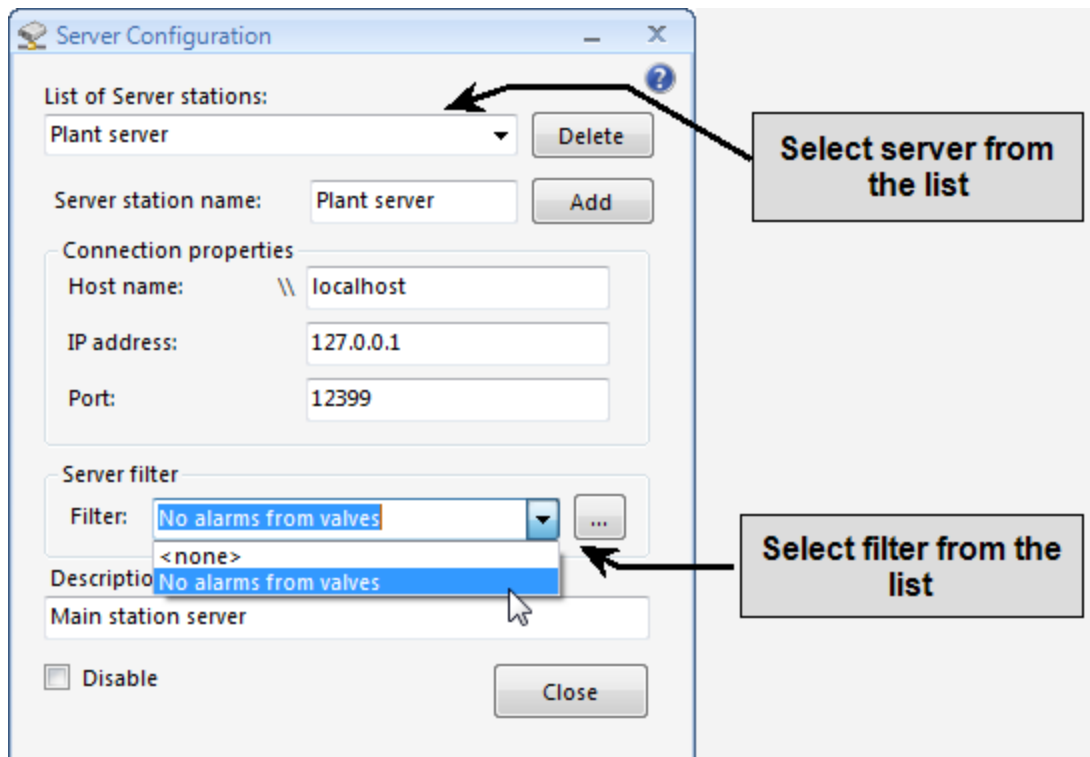
To assign a global filter to Notifier

1. Click the **Application Button** and choose **Notifier Options** at the bottom of the menu. The **Notifier Options** dialog box appears.
2. Select **Special Options**.
3. Under **Global alarm filter** select the checkbox and choose a filter from the drop-down menu. This filter will now apply for all alarms going through **Notifier**.



To assign a filter to a server in Notifier:

1. Go to the **Configuration** ribbon and click the **Add server station**  button.
2. Find and select the server in the **List of Server Stations**.
3. Under **Server filter** select the filter from the drop-down list. This filter now applies for all alarms handled by this server.

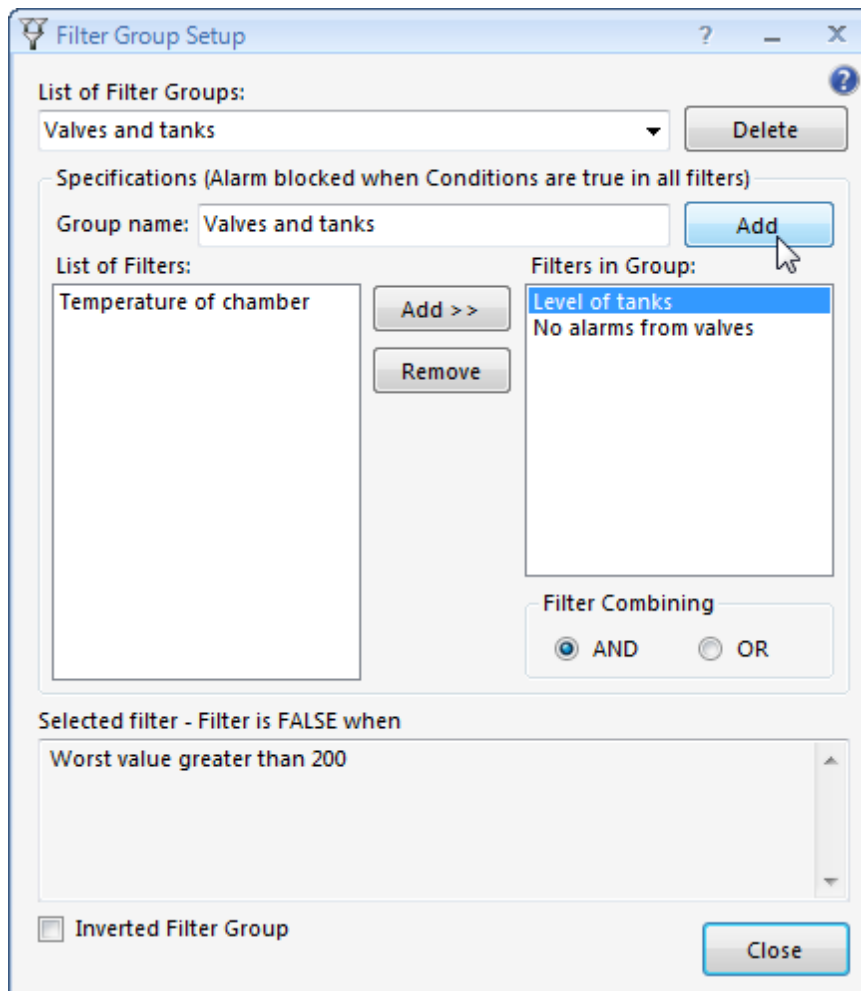


How to use Filter Groups

Filter Groups allows you to collect several different alarm filters into one group and then apply the group to for example an operator. Applying a group makes it possible to have several filters active at once.

To create a Filter Group

1. Go to the **Configuration** ribbon.
2. Click on the **Manage filter groups** button. The **Filter Group Setup** dialog box opens.
3. Write a name in the **Group name** field.
4. On the left under **List of filters** are the names of the exiting filters, and these are added to the group one-by-one by selecting them and then clicking the **Add** button. Notice the **Filter Combining** settings **AND**, **OR** and **Inverted Filter Group**, which are used in the same way as for an individual filter.
5. Click **Close** when finished adding filters, and now the group is ready to be applied to an alarm recipient.



It's not possible to create the filters in the **Filter Group Setup** dialog box. This must be done in the **Filter Setup** dialog box before creating groups.

After creating the first filter group, the next group can be created by overwriting the name of the first group in the **Group name** field, but the individual filters selected for the previous group will appear as members of the new group. Therefore you must use the **Remove** button to delete the unwanted filters from the **Filters in Group** list.

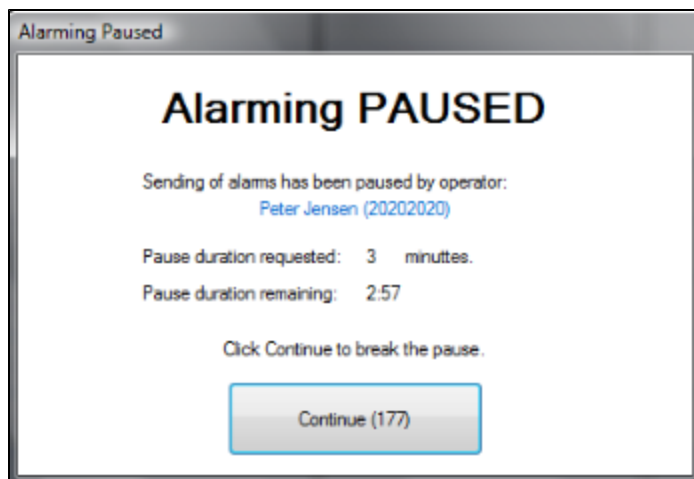
4.6 Using Notifier from Your Mobile Phone

Text messaging features

Here is a list of text message features in **Notifier**.

- Activate/deactivate calendars by sending a text message with the calendar name to **Notifier** for example "*Night shift calendar*".
- Acknowledge all alarms by writing "**KA**" or "**AA**" in a text message to **Notifier**.
- Acknowledge an alarm by returning the original alarm text message back to **Notifier**.

- Receive object values by writing "**objectname@server**", for example "**Q1@DemoServer**" gives you the actual value/state for the Q1 object. You must enable this feature from the Remote Control page. For more info see "Remote Control" on page 57.
- Send commands from mobile phones to IGSS objects, for example to Run/Stop a pump. The available commands must first be defined on the Remote Control page.
- Receive a list of available commands by sending a text message with the text "**commands**". The commands are defined on the **Remote Control** page.
- Pause all alarms for a defined period of time, for example by writing "**Pause 3**". This stops alarm forwarding to operator mobile phones for 3 minutes. Alarms are still collected in **Notifier**. If no number is included, 5 minutes is automatically chosen. Operators viewing **Notifier** from their operator station will see this message when **Notifier** is paused. Clicking the **Continue** button immediately ends the pause.



Defining Remote Control

This procedure will illustrate how remote control of IGSS objects is set up. In this example we want to allow the operators to turn the lights on and off at the plant from their mobile phones.

[Click here to view the final result](#)

Notifier Options

Personalize

Alarm

SMS Alarms

Remote Control

SMS Content

Service Providers

Special Options

Remote Control of IGSS.

Enable setting IGSS object values from operator mobiles.

Command

SMS Message:

Object@Area: Set value: Value in SMS

IGSS Atom:

To Server:

Commands

	SMS Message	Object	Atom	Server	Set value	Value
▶	LightsOff	lamp@firstfloor	Command	Demo Server	<input checked="" type="checkbox"/>	0
	LightsOn	lamp@firstfloor	Command	Demo Server	<input checked="" type="checkbox"/>	1

Enable getting IGSS object values from operator mobiles.

Get values setup

Default Server:

Operator can get values by SMS from IGSS by sending objectname? for the Default Server and objectname@servername? for other IGSS servers.

To define commands for remote control do the following:

1. Select the checkbox **Enable setting IGSS object values from operator mobiles.**
2. In the **SMS Message** field type "*LightsOn*". This is the text message that should be sent to Notifier when this command is to be issued.
3. In the **Object@Area** field type "*lamp@firstfloor*". This is the name(*lamp*) and area(*firstfloor*) of that object which should be changed when the command is issued.
4. In **IGSS Atom** select **Command** since we want to send a command to a digital object.
5. In the **To Server** field you must select the server where the object *lamp* is located for example *localhost(IGSS)*.
6. Select the **Set Value** checkbox and type "*1*" in the field next to it. The command will now, when issued, set the bit for the command **atom** to high.
7. Finish with clicking the **Add** button. The command is now added to the list of **Commands** right below.
8. Repeat step 2-7 but with the **SMS Message** name "*LightsOff*" and **Set Value** to "*0*".

The commands for remote control of the lights on the first floor is now completed and can then be issued from operator mobile phones.

4.7 SMS Alarms from Other SCADA/HMI Systems

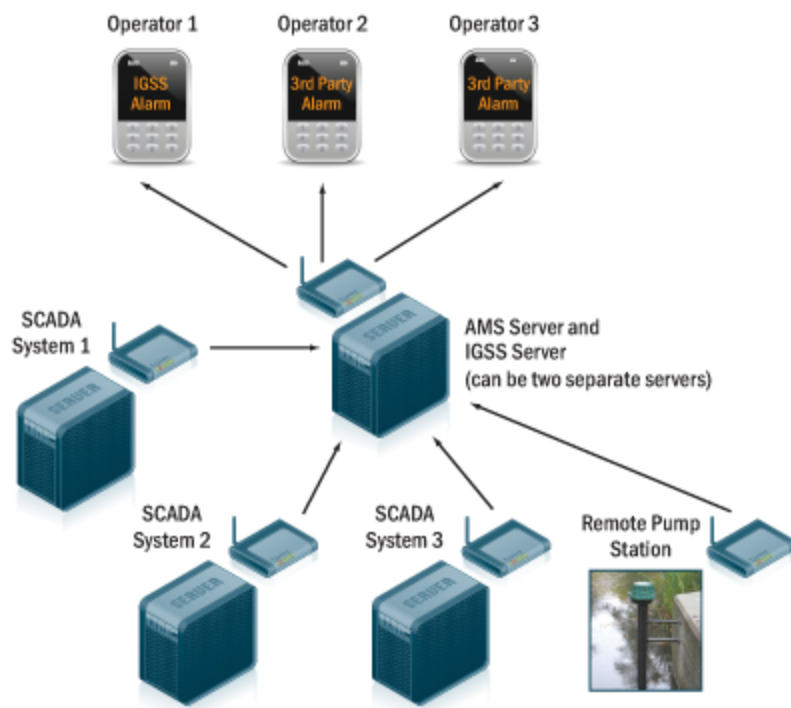
SMS Alarms - How it works

Notifier allows you to receive alarms from other **SCADA**¹/HMI systems or offline equipment which is not connected to a SCADA system. The system sending the alarm must have an SMS service, which can then send the alarm to **Notifier** via modem.

This feature allows plant operators to receive and acknowledge alarms from multiple plants. **Notifier** thus becomes the control center for alarms from, for example, IGSS, InTouch and iFix plants.

Using this feature requires an IGSS license with 3rd party connectivity to **Notifier**. Once the license is activated, you can connect as many SMS services as you need.

The illustration below shows how the **SMS Alarms**² feature works.



¹Supervisory Control & Data Acquisition

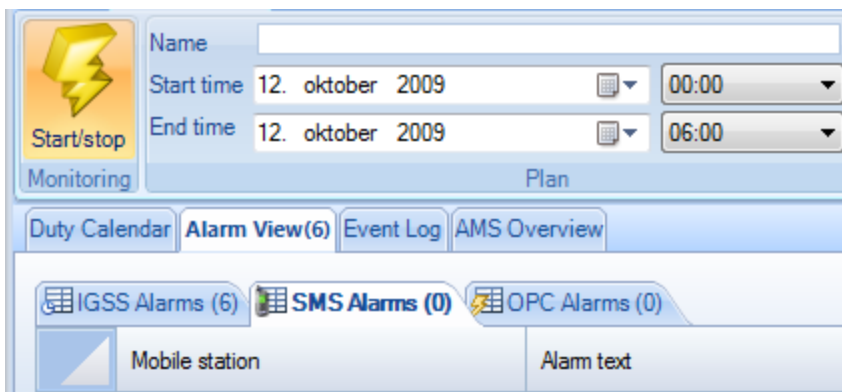
²An SMS Alarm is an alarm which has been sent to AMS from an SMS service. Some 3rd party SCADA/HMI systems feature an SMS service.

Enable, Set up and Use SMS Alarms

This step-by-step procedure explains how you set up SMS servers and receive **SMS Alarms**¹ from other **SCADA**²/HMI systems in Notifier.

Step 1: Enable SMS Alarms in Notifier

1. To be able to receive SMS Alarms from non-IGSS systems, your IGSS license must include the 3rd party connectivity to Notifier option.
2. The license file, Options.txt, with the above option must be located in the [IGSS Install-Path]\Gss folder.
3. When activated, Notifier will show an **SMS Alarms** tab in the **Alarm View**.



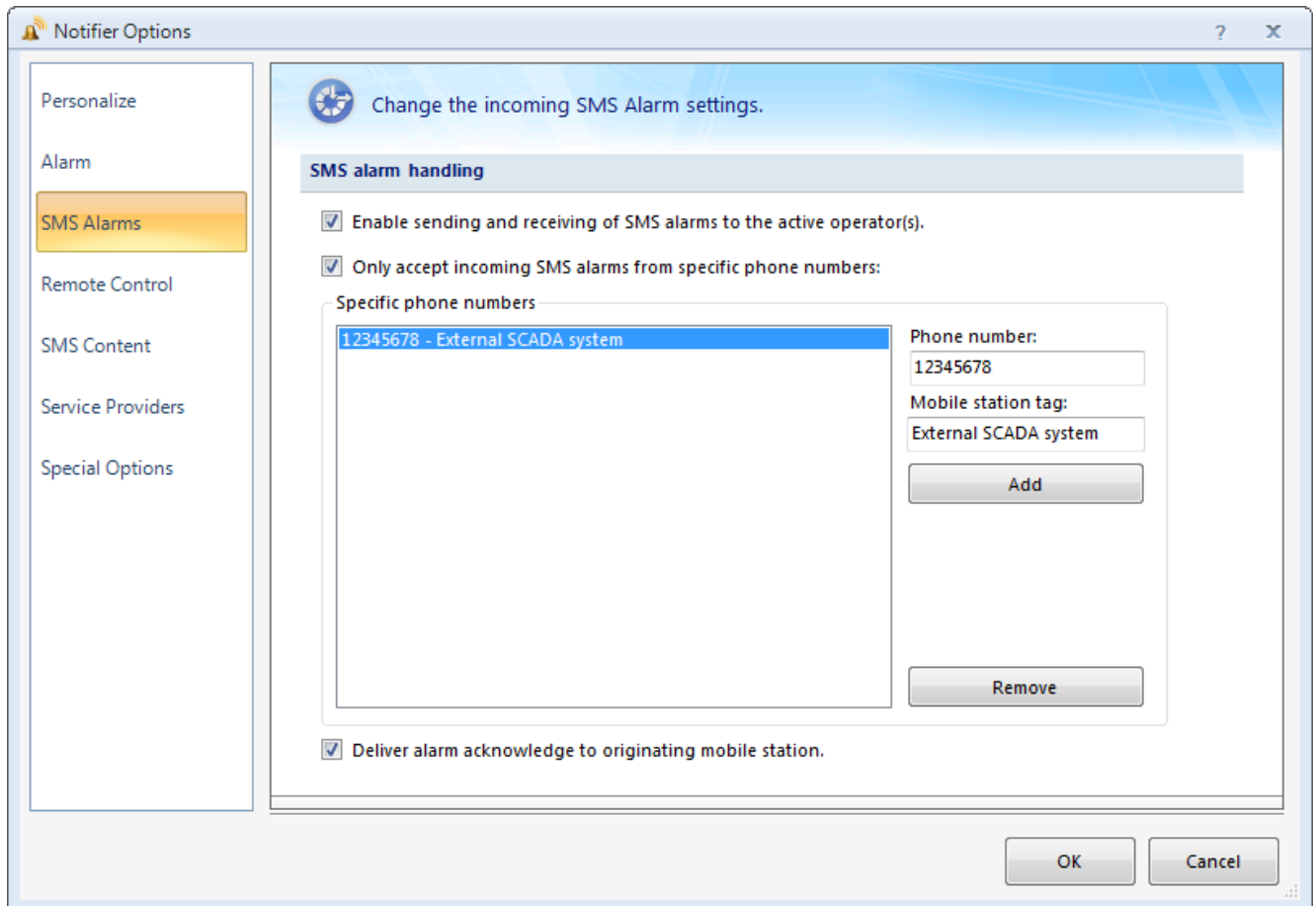
Step 2: Set up the SMS servers

1. Click the Application Button in the upper left corner of the Notifier window.
2. Click the **Notifier Options** button.
3. Click the **SMS Alarms** tab.
4. Do the following:
 - Select the first check box to enable sending and receiving of SMS alarms.
 - Select the second check box to specify the phone numbers of the SMS servers which will send SMS alarms to Notifier.
 - Enter the phone number and a descriptive name under **Phone number** and **Mobile station tag**. Click the **Add** button for each server to be added.

¹An SMS Alarm is an alarm which has been sent to AMS from an SMS service. Some 3rd party SCADA/HMI systems feature an SMS service.

²Supervisory Control & Data Acquisition

- If you want Notifier to send the SMS message back to the sending modem on alarm acknowledgement, select the **Deliver alarm acknowledge to originating mobile station** check box.



5. Click **OK** when you've set up all SMS servers.

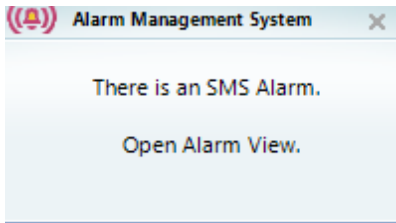
Notifier will now receive alarms from the specified phone numbers. It is possible to set up filters for SMS Alarms, but the you can only filter on the content of the alarm text.

The operator will be able to acknowledge the alarm back to the specified phone number. But it depends on the system whether the sending modem is able to forward the acknowledgement to the SCADA/HMI system.

Step 3: Receive and acknowledge SMS Alarms

1. In the Notifier **workspace**¹, click the **Alarm View** tab. Alarms received from the SMS servers will now be listed. When a new alarm occurs, this notification will occur.

The SMS Alarms will be sent to the primary operators in the active **duty calendar**²(s).



2. In the **Alarm View**, you can acknowledge and remove alarms. Right-click and select the relevant function. If an operator acknowledges from his cell phone, this will also be shown in this list.

Mobile station	Alarm text	Start date	Start time	Acknowledge date	Acknowledge time	User
40599640 - iFix SMS, Plant 2	Pump overheated	06-10-2009	14:50:41			
51295181 - InTouch SMS, Plant 1	Engine stopped. Lower oil limit reached.	06-10-2009	14:53:36	06-10-2009	15:05:17	AMS
51295181 - InTouch SMS, Plant 1	Engine stopped. Lower oil limit reached.	06-10-2009	15:02:13			

¹An area of the screen, similar to the desktop, where all the user tasks are executed, i.e. the duty calendar.

²A calendar which contains the duty plans.

4.8 Using Notifier on Single User Backup Stations

Using Notifier on Single User Backup stations

With several running **Notifier** programs, you can forward your alarms from a Single User Backup Station, even if the main IGSS server is down.

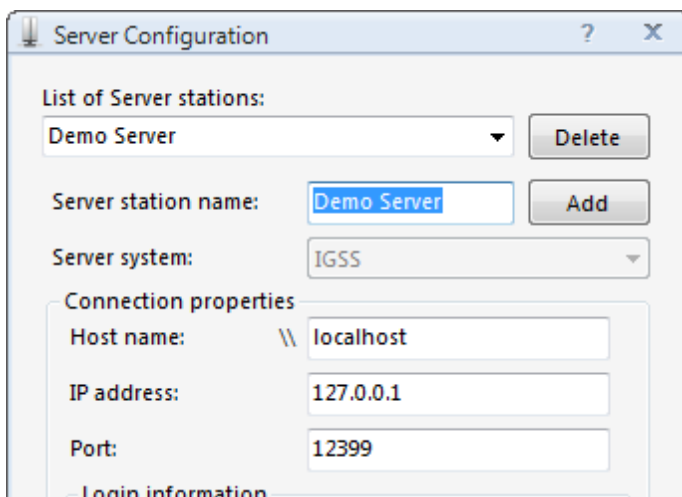
The **Notifier** program running on the Single User Backup station only forwards alarms to operators when this station is in backup-mode.

To set up Notifier on a Single User Backup station:

1. Create shared folder and place the **Notifier** project file here. This folder must be accessible from both the IGSS server station and the Single User Backup station.
2. In **Notifier**, open the **Notifier Options** window and select the **Personalize pane**.
3. Select the following three check boxes and finish by clicking **OK**.:
 - **Auto load latest saved IGSS project**
 - **Auto start Alarm Monitor on Notifier startup**
 - **Subscribe changes**

These settings are only applied to the local **Notifier** program and can be set up differently for other **Notifier** programs.

4. In the **Notifier** program window, select the **Configuration** tab and open/create the IGSS server.
5. Make sure that the IGSS server **host name** is set to "localhost" and the **IP address** to "127.0.0.1".



6. Test the settings by disconnecting the main IGSS server and generating an alarm for the **Notifier** to handle.

Chapter 5: Dialog Box Help

5.1 Notifier Options

Notifier options

These options control the global settings for **Notifier**, and how the whole program should function.

"Personalize" on page 51 - Contains global settings for the layout and startup process of **Notifier**.

"Alarm" on page 53 - Controls handling of alarm registration and alarm forwarding processes.

"SMS Alarms" on page 56 - enable alarms on SMS and control limits.

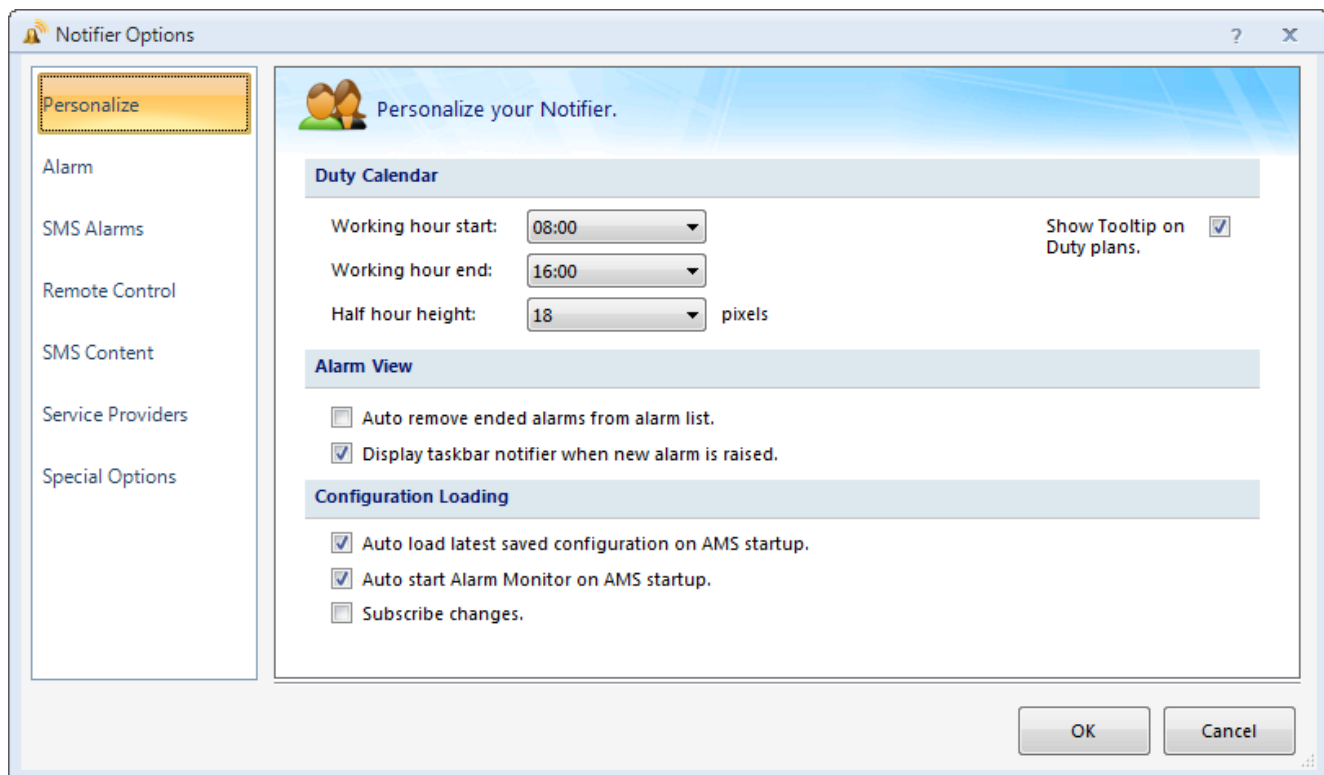
"Remote Control" on page 57 - control IGSS objects from operator mobile phones.

"SMS content" on page 59 - Determines the contents of the SMS alarm messages forwarded to the operators mobile phones.

"Service providers" on page 61 - Defines communication between **Notifier** and the operators.

"Special options" on page 63 - Additional features such as supervisor role and global filter.

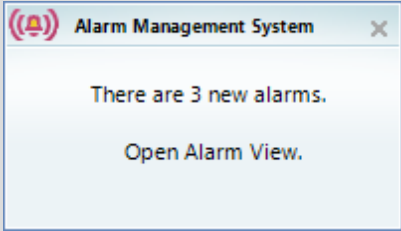
Personalize



Overview

The **Personalize** options contain global settings for the layout and startup process of **Notifier**.

Field Help

Field name	Description
Color scheme	Choose between three different Windows color schemes in the drop down list.
Language	<p>Gives you a drop down list of the available languages Notifier can run in.</p> <p>Requires Notifier to restart if the language is changed.</p>
Working hour start	Sets the start time for the light background color in the calendar.
Working hour end	Sets the end time for the light background color tone in the calendar
Half hour height	Sets the height for the half hour boxes in the calendar in pixels.
Show tooltips on duty plan	If enabled, a tooltip will pop up when the cursor is held above a duty plan.
Auto remove ended alarm from alarm list	Removes an alarm from the alarm list when the alarm has been ended in the IGSS.
Display taskbar notifier when new alarm is raised	<p>Shows the number of new alarms received by Notifier as a popup message.</p> 
Auto load latest saved configuration on Notifier startup	When Notifier is loaded, the last configuration that was saved is automatically opened.
Auto start monitoring on Notifier startup	When Notifier is loaded, monitoring is automatically started (Notifier is online).
Subscribe to configuration changes	<p>If the Notifier configuration file in the IGSS database is changed by another Notifier, this function will automatically apply these changes to the running configuration.</p> <p>If Notifier cannot connect to the server, the backup configuration stored in the default configuration folder will be executed.</p>

Alarm

Notifier Options

Personalize

Alarm

SMS Alarms

Remote Control

SMS Content

Service Providers

Special Options

Change the alarm settings.

Alarm polling

Check for new alarms every: seconds

Suppress repeating alarms for: minutes

Delay alarm delivery: seconds

Alarm notifying (IGSS only)

Acknowledge server station alarms by SMS with:

Alarm number. First number in object description.
 Both (Object description number followed by alarm number).

If alarm is not acknowledged send message to backup operator after: minutes

If alarm is not acknowledged by primary send command "1" to IGSS object:

Restart alarm process if it has not been acknowledged within: minutes

Repeat alarm to primary for duty plans with cycled alarms every: minutes

Send message to all notified active operators when alarm is acknowledged.

Send message to all notified active operators when alarm ends.

Only send reply to acknowledge SMS on errors.

Send alarm to current operators if server does not reply: times

Do not send existing IGSS alarms when monitoring starts.

Alarm sending (IGSS only)

Always send alarms in Backup Mode, even when Backup is not Active.


OK Cancel

Overview

These settings control how **Notifier** should handle the alarm registration and alarm forwarding processes.

Field Help

Field name	Description
Check for new alarms every <number> seconds	Select how often Notifier should poll the IGSS server for newly raised alarms.
Suppress repeating alarms for <number> minutes	If Notifier receives an alarm identically to a just acknowledged and ended alarm, Notifier will ignore this new alarm until this time period expires.

Field name	Description
Delay alarm delivery	When a new alarm is received by Notifier , this function delays the alarm message forwarding process with the given time interval.
Acknowledge server station alarms by SMS with <option>	<ul style="list-style-type: none"> • Alarm number - Operators acknowledge alarms by replying with a text message containing only the alarm number. • First number in object description - Operators acknowledge alarms by replying with a text message containing the first number in the object description. • Both (object description number followed by alarm number) - Operators acknowledge alarms by replying with a text message containing both of the above elements. <p>First number in object description requires the use of a predefined naming convention that is inserted in the description field of the IGSS object where a number scheme is the first part of the description.</p>
If alarm is not acknowledged, send message to backup operator after (number) minutes	When the selected time interval has elapsed, Notifier will forward the alarm message to the assigned backup operator, if the alarm has not been acknowledged by the primary operator.
If alarm is not acknowledged by primary send command "1" to IGSS object:	Select this check box, to send the command "1" to the specified IGSS object. For example, write "ack01@Global", to send the command "1" to the object <i>ack01</i> , if the backup operator acknowledges the alarm.
Restart alarm process if it has not been acknowledged within (number) minutes	When neither the primary nor backup operator has acknowledged the alarm message, the whole alarm delivery process will begin all over, when the selected time interval has elapsed, starting with the primary operator again. <p>The time for the restart alarm process is counted from the time when the alarms are sent to the primary operator.</p>
Repeat alarm to primary for duty plans with cycled alarms every (number) minutes	When this option is selected, an alarm message will be sent to the primary operator for every time the given time interval has elapsed. This continues until the alarm is acknowledged by either the primary or backup operator. <p>You must also activate this function in the duty plan¹. To do this, go to the Duty Calendar tab, select the duty plan and click the Cycle alarms to primary  button.</p>
Send message to all noti-	Choose this setting to inform all operators on duty who have received

¹A time block that shows which operators that are on duty in the given time period.

Field name	Description
Send message to all notified active operators when alarm is acknowledged	the alarm that it has been acknowledged.
Send message to all notified active operators when alarm ends	Choose this setting to inform all operators on duty, who have received the alarm, that it has been ended.
Only send reply to acknowledge SMS on errors	When this option is selected, operators will not receive a confirmation when an alarm is acknowledged by a text message, only if an error has occurred when trying to acknowledge.
Send alarm to current operators if server does not reply	Select this checkbox to make Notifier send a Keep Alive message to the server. Type the number of times that you will accept a missing respond from the server. If this number of missing responds are exceeded an alarm will be generated in Notifier .
Do not send existing IGSS alarms when monitoring starst	Select this checkbox if you do not want to receive already existing alarms on operator mobile phones when Notifier is started. This means that Notifier will not send out any alarms picked up from its first scan when started.
Always send alarms in backup mode even when backup is not active	If a Single User Backup station is connected with the server, this option will enable alarm forwarding to Notifier even if the primary server is still running.
Only send alarms if no reply from server	<p>This alarm setting is only relevant for a system with a Dualized-Server IGSS set-up.</p> <p>Select this checkbox to enable a back-up IGSS server to send SMS alarms if the primary IGSS server is offline. If this checkbox is not selected, the back-up IGSS server will send SMS alarms regardless of whether the primary IGSS server is offline or not.</p> <p>You must specify the correct IP address and communication port of the primary server. The backup-server will use the specified IP address and communication port to contact the primary server. If you do not specify the correct IP address and communication port, the back-up server will not be able to contact the primary IGSS server and will therefore send SMS alarms.</p> <p>Note that alarms are still registered on the back-up IGSS server. This alarm setting only restricts sending of SMS alarms by the back-up IGSS server.</p> <p>This alarm setting should only be enabled on a back-up server. The Only send alarms if no reply from server checkbox should be cleared for a primary IGSS server.</p>

SMS Alarms

Overview

SMS Alarms¹ are alarms received from a mobile station which sends a SMS to **Notifier** if an alarm occurs on this station. Here you can enable/disable SMS Alarms and set a limit for which phone numbers that can send alarms to IGSS.

License requirements

In order to use this service, you must purchase an add-on license to the **Notifier** program.

Field Help

Field	Description
Enable sending and receiving of SMS alarms to the active operators(s)	Click this check box to enable SMS Alarms.
Only accept incoming SMS alarms from specific	Click this check box if you want to limit which phone numbers that are able to send SMS Alarms to IGSS.

¹An SMS Alarm is an alarm which has been sent to AMS from an SMS service. Some 3rd party SCADA/HMI systems feature an SMS service.

Field	Description
phone numbers	
Phone number	Write the phone number for which you want to enable sending of SMS Alarms to IGSS and click the Add button.
Mobile station tag	Here you can define a tag for the incoming SMS Alarm message. This tag will then be shown in the alarms list when this phone number sends an alarm message to IGSS.
Deliver alarm acknowledge to originating mobile station	If you check this box the SMS Alarm messages received by IGSS will be returned to the mobile station when an operator acknowledges the alarm.

Remote Control

Notifier Options

Personalize
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Special Options

Remote Control of IGSS.

Enable setting IGSS object values from operator mobiles.

Command
SMS Message:
Object@Area: Set value:
IGSS Atom: Value in SMS
To Server:

Commands

	SMS Message	Object	Atom	Server	Set value	Value
▶	LightsOff	lamp@firstfloor	Command	Demo Server	<input checked="" type="checkbox"/>	0
	LightsOn	lamp@firstfloor	Command	Demo Server	<input checked="" type="checkbox"/>	1

Enable getting IGSS object values from operator mobiles.

Get values setup
Default Server:

Operator can get values by SMS from IGSS by sending objectname? for the Default Server and objectname@servername? for other IGSS servers.

Overview

On the **Remote Control** menu tab you can define SMS commands for controlling IGSS objects from operator mobile phones.

For a procedure example of how to setup remote controls see Defining Remote Control (page 44)

Field Help

Field name	Description
Enable setting IGSS object values from operator mobiles	This box must be checked if you want to use the option of controlling IGSS objects from operator mobile phones.
SMS Message	In this field you type the text string that the operator should send to Notifier when a command is to be issued.
Object@Area	Here you type in the object that this command should apply for. For example, " <i>lampB2@firstfloor</i> ", where <i>lampB2</i> is the object name and <i>firstfloor</i> is the area.
Set value	Here you specify the value that should be set for the atom for the selected object.
IGSS Atom	Here you select the atom this command should
Value in SMS	Check this field if you want to set a value for the atom directly from the SMS. For example "lights 1", to set the atom to the value "1". <div style="border: 1px solid gray; padding: 5px; margin: 5px 0;"> When defining the value Space is the only allowed delimiter, for example "lights,1" will not work. </div>
To Server	Here you must select the IGSS server where the chosen object is located.
Add	Click this button to add the command defined in the above fields to the list of SMS commands.
Commands	This list shows all the SMS commands that are defined, what objects they control and which atom values they will issue.
Remove	Click this button the remove the selected command from the list.
Enable getting IGSS object values from operator mobile phones	Select this check box if you want to allow operators to receive process values for IGSS objects on their mobile phones.
Default server	This is the default IGSS server name used. If this is set to "Demo server", sending the message "Q1" will give you the process value of the object Q1 on the Demo server. Writing "Q1@RemotePumpA" will give you the process value of Q1 on the RemotePumpA server.

SMS content

Notifier Options

Personalize

Alarm

SMS Alarms

Remote Control

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Service Providers

Special Options

Change the outgoing SMS content.

Information to include in SMS

Title:

Server station name

Alarm number

Alarm state

Alarm priority

Alarm start time (UTC)

Alarm start time (local)

Object name

Area name

Worst value

Driver info (for driver alarms)

Object description

Alarm text

OK Cancel

Overview

These settings determine the contents of the alarm text messages forwarded to the operator's mobile phone.

These settings are only valid for alarms received from the IGSS **SCADA**¹ system.

Field Help

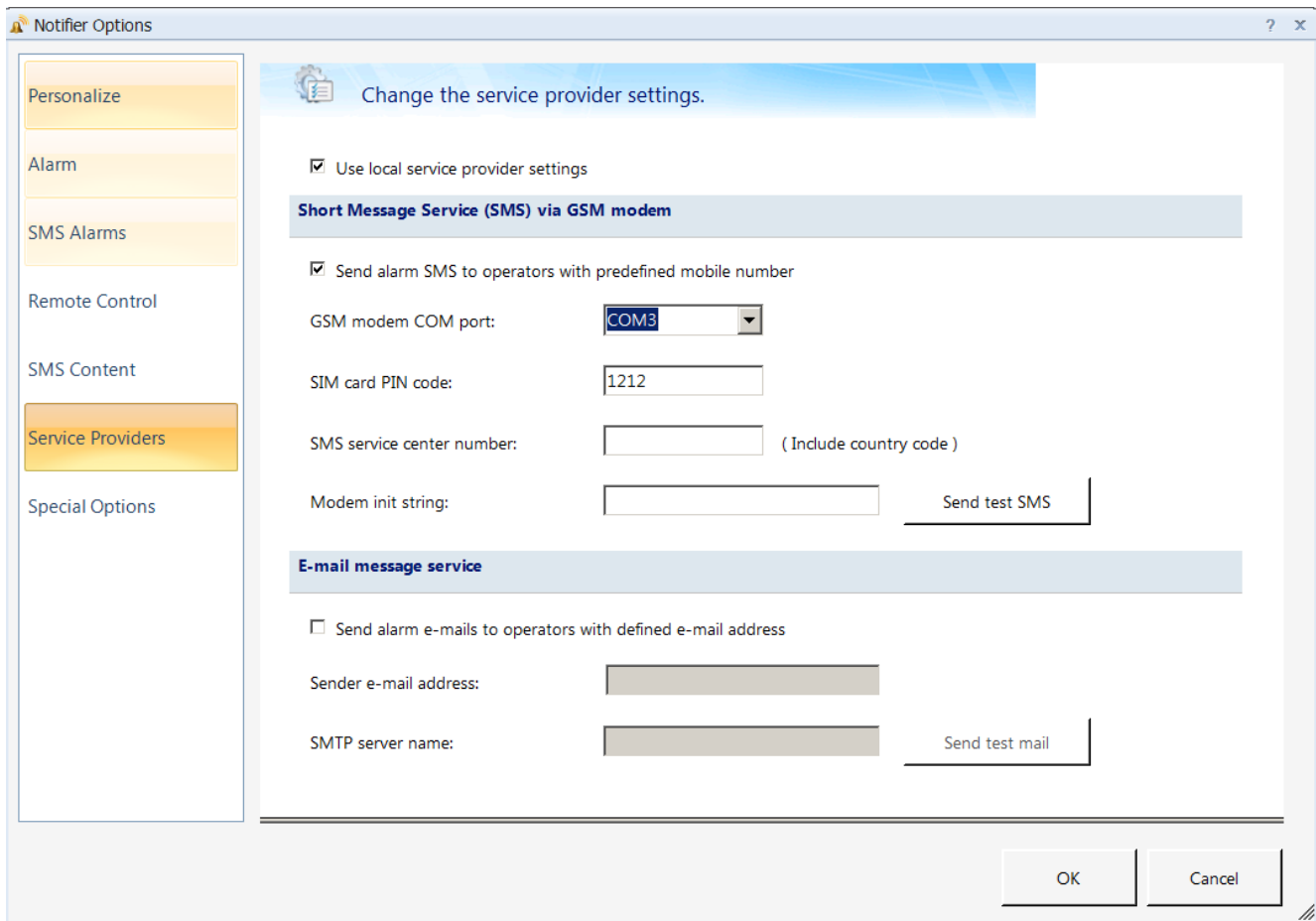
Field name	Description
Title	If enabled the name in this field will appear as the header of the alarm text message forwarded to the operators.
Content list	<ul style="list-style-type: none"> Server station name - Name of the server station where the alarm originated from. Alarm number - This number is defined in the Definition module.

¹Supervisory Control & Data Acquisition

Field name	Description
	<ul style="list-style-type: none"> • Alarm state - If the alarm is Active or Ended. • Alarm priority - A number indicating the severity of the alarm. • Alarm start time (UTC¹) - Start time showed in UTC time. • Alarm start time (local) - Start time showed in local time. • Object name - The name of the object which the alarm is attached to. • Area name - The name of the area in the Supervise module, where the object in alarm is located. • Worst value - The object's worst value. • Driver info (for driver alarms) - If the alarm is a driver alarm, this shows the driver specific info. • Object description - The object's description created in the Definition module. • Alarm text - The text of the alarm created in the Definition module. <p>For more info on alarms see the Alarms and Events help file.</p> <p>For more info on objects see the Definition help file.</p>

¹Universal Time Coordinated (formerly Greenwich Mean Time), used as the basis for calculating time in most parts of the world. IGSS uses this time format internally in the database. You can switch between UTC and local time by enabling or disabling the "UTC" field in various dialog boxes in the system.

Service providers



Overview

These settings determine the communication parameters used by **Notifier** to forward alarm messages to the operators.

Field Help

Field name	Description
Use local service provider settings	If multiple Notifier servers are connecting to the same SCADA ¹ system, it is possible to save and read the GSM modem settings locally. By default, Notifier will save/read in the configuration file, [File-name].ams. If you activate this check box, the settings will be saved/read in the Windows Registry.
Send alarm SMS to operators with predefined mobile number	Must be selected to enable delivery of alarm text messages to duty operators.

¹Supervisory Control & Data Acquisition

Field name	Description
GSM modem COM port	Select the appropriate COM port in the drop-down list.
SIM card PIN code	Type the PIN code for the SIM card in your the GSM modem.
SMS service center number	Type the phone number to the service center of your tel-communications provider. This is often provided together with the SIM card.
Modem init string	Normally this setting should not be changed because it's a standard modem initialization string.
Send test SMS	Opens a dialog box where you can send a test text message to one of the operators to verify that the selected settings are working.
Send alarm e-mail to operators with predefined e-mail address	Select this check box to enable sending of e-mail alarm messages to operators with e-mail addresses.
Sender e-mail address	Enter the e-mail address of the sender the alarm e-mail message is sent on behalf of.
SMTP server name	Enter the name of your SMTP Mail server. If you do not have your own SMTP mail server, this information is usually obtained from the Internet service provider that provides access to mail services.
Send test mail	Click this button to test if e-mail communication is correctly set up.

Special options

The screenshot shows the 'Notifier Options' dialog box with the 'Special Options' tab selected. The main area is titled 'Change the special options.' and contains three sections:

- Supervisor alarm sending settings:**
 - Send all alarms and alarm call offs to selected supervisor: Michael
 - Weekends between hours: 16:00 - 06:00
 - Weekdays between hours: 16:00 - 06:00
- Global alarm filter:**
 - Block incoming alarms to Notifier defined by selected filter: Exclude pump high limit alarms
 - Worst value less than 3
- Special messages:**
 - Send message to operator when his period of duties starts.
 - Send message if the operator change type. (Backup -> Primary etc.)
 - Send message to operator each time a new duty starts.


Buttons for 'OK' and 'Cancel' are located at the bottom right.

Overview

These settings allow you to assign a supervisor to the **Notifier** system, and globally control which messages should be forwarded to the operators.

Field Help

Field name	Description
Send all alarms and alarm call offs to selected supervisor	<p>Select one of the operators previously created to receive all alarms and call offs generated in the time interval chosen underneath.</p> <p>When used, Primary and Backup operators will still receive these alarm messages as normally.</p>

Field name	Description
Weekends between hours	Select the period during which the supervisor will receive the alarm messages during weekends.
Weekdays between hours	Select the period during which the supervisor will receive the alarm messages during weekdays.
Block incoming alarms to Notifier defined by selected filter	<p>Select this check box to apply a global filter to the Notifier server. Click the drop-down menu below to bring up a list of available filters and select the one required.</p> <div style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;"> <p>Click on the browse  button to enter the Filter Setup dialog box if you want to create a new filter.</p> </div>
Send message to operators when his period of duty starts	Select this check box if you want to inform the duty operators when their duty plan ¹ period begins.
Send message if the operator change type (primary -> backup etc.)	Select this check box if you want to inform the operators when changes are made to their duty role, during a change between two duty plans, for example Primary to Backup.
Send message to operator each time a new duty starts	Select this check box if you want to inform the operators each time a new duty plan begins.
Send daily message to supervisor at	<p>Select this check box to send a daily status SMS message to the supervisor selected in the Supervisor alarm sending settings group in the top of the Notifier Options form. After you have selected this check box, you must define the time to send the status SMS.</p> <p>The SMS message contains information about the current running status of the Notifier module.</p>
Send daily message to primary operators at	<p>Select this check box to send a daily status SMS message to all primary operators defined for the Notifier module. After you have selected this check box, you must define the time to send the status SMS.</p> <p>The SMS message contains information about the current running status of the Notifier module.</p>

¹A time block that shows which operators that are on duty in the given time period.

5.2 Calendars

Calendar list: Day Shift Delete

Calendar

Name: Day Shift Add

Description:

SMS name: DS (Short name used in Calendar state SMS.)
Chars. left: 117

Activation

Inactive:

Evening Shift
Night Shift

Add >>

Remove

Active:

Day Shift

Use IGSS to control Calendars active states.

Calendar Control Setup

Calendar object name in IGSS: CALOBJ

From IGSS Server: IGSS Server

Calendar states by object value:

	Object value	Day Shift	Evening Shift	Night Shift
	Day	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Evening	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Night	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Evening-Night	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

OK Cancel

Overview


The **Calendars** dialog box is used to add more calendars to your **Notifier** configuration. This is useful to prevent ending up with just one crowded and confusing calendar and gives you the ability to change the states of calendars on the fly either by a text message, from **Notifier** or from IGSS.

For a step-by-step procedure on using additional calendars see Adding more Calendars (page 35).

Where do I find it?

Under the **Configuration** ribbon, click the **Calendars**  button to open this dialog box.

Field Help

Field name	Description
Calendar list	Click the drop-down list to view a list of all existing calendars in Notifier .
Delete	Deletes the calendar displayed in the drop-down list to the left.
Name	Shows the name of the current calendar. When creating a new calendar, start by typing a name for it in this field, and then click the Add button.
Description	Here you can type in additional descriptions of this calendar.
SMS name	It is possible to send a text message to Notifier , that will change the active state of a calendar. To do so, send a text message containing the name typed in this field. More info?
Inactive	Shows a list of all the currently inactive calendars. An inactive calendar will not forward any alarms that might occur in its duty plans nor will its duty plans be shown in the Main calendar.
Active	Shows a list of all the currently active calendars.
Add/Remove	Here you can activate/deactivate the calendars by moving them between the two lists from above. To do this, mark a calendar with the cursor and click the Add or Remove button. You can also toggle a calendar's active state from the Duty Calendar tab. To do this go to the Duty Calendar tab and click the Calendar activation  button. This opens a dialog similar to this, where you can add or remove calendars from the two lists.
Use IGSS to control calendars' active states	This option allows IGSS to activate or deactivate calendars. This is done by defining a Calendar object in the IGSS configuration . The Calendar object must be defined as a digital object. The number of states and commands must match the number of calendar combinations you want. If you only activate one calendar at a time, we recommend that you use the same command/state names as Notifier calendar names.
Calendar object name in	Type the name exactly as defined in IGSS, in order for Notifier to rec-

Field name	Description
IGSS	ognize it.
From IGSS Server	Select the relevant IGSS server. You can have one Calendar object per IGSS configuration.
Calendar states by object value	Here you set the parameters for when the calendar object should toggle the activation. If the object reaches a state equal to the one defined under Object Value, then the calendar(s), which are selected in the same row, will be activated and the rest will be deactivated.

5.3 Duty Recurrence

The screenshot shows the 'Duty Recurrence - Duty 1' dialog box. It is divided into three main sections: 'Duty time', 'Recurrence pattern', and 'Range of recurrence'. Three callout boxes with arrows point to specific fields:

- Check that the time intervals are as desired:** Points to the 'Duty time' section, specifically the 'Start' (07:00), 'End' (15:00), and 'Duration' (8 hours) dropdown menus.
- Choose the days that should have this duty:** Points to the 'Recurrence pattern' section, specifically the 'Weekly' radio button and the checkboxes for Monday, Tuesday, Wednesday, and Thursday.
- Select when to begin and end the recurrence:** Points to the 'Range of recurrence' section, specifically the 'Start' date (24. april 2008) and the 'End by' date (24. juni 2008).

At the bottom of the dialog box are three buttons: 'OK', 'Cancel', and 'Remove Recurrence'.

Overview

The **Duty Recurrence** dialog box is used to define recurrence for a selected **duty plan**¹. This function allows you to duplicate a duty plan in the **duty calendar**², which repeats itself over time. This can save a lot of time when creating the duty calendar.

For a step-by-step procedure on using recurrence see Using recurrence (page 33).


Preconditions

To use recurrence you must already have created a duty plan that you wish to duplicate through a period of time.

Where do I find it?

¹A time block that shows which operators that are on duty in the given time period.

²A calendar which contains the duty plans.

Select a duty plan in the duty calendar and click the **Duty Recurrence**  button.

Field Help

Duty time

Field name	Description
Start	This field shows when the selected duty is due to start. If desired, this can be changed from this dialog by clicking the drop-down list and choosing an appropriate time.
End	This field shows when the selected duty is due to end. This can also be changed from here by clicking the drop-down list and choosing an appropriate time.
Duration	Shows the total number of hours the duty covers. If more or fewer hours are selected in the drop-down list, the end time will change accordingly.

Recurrence Pattern

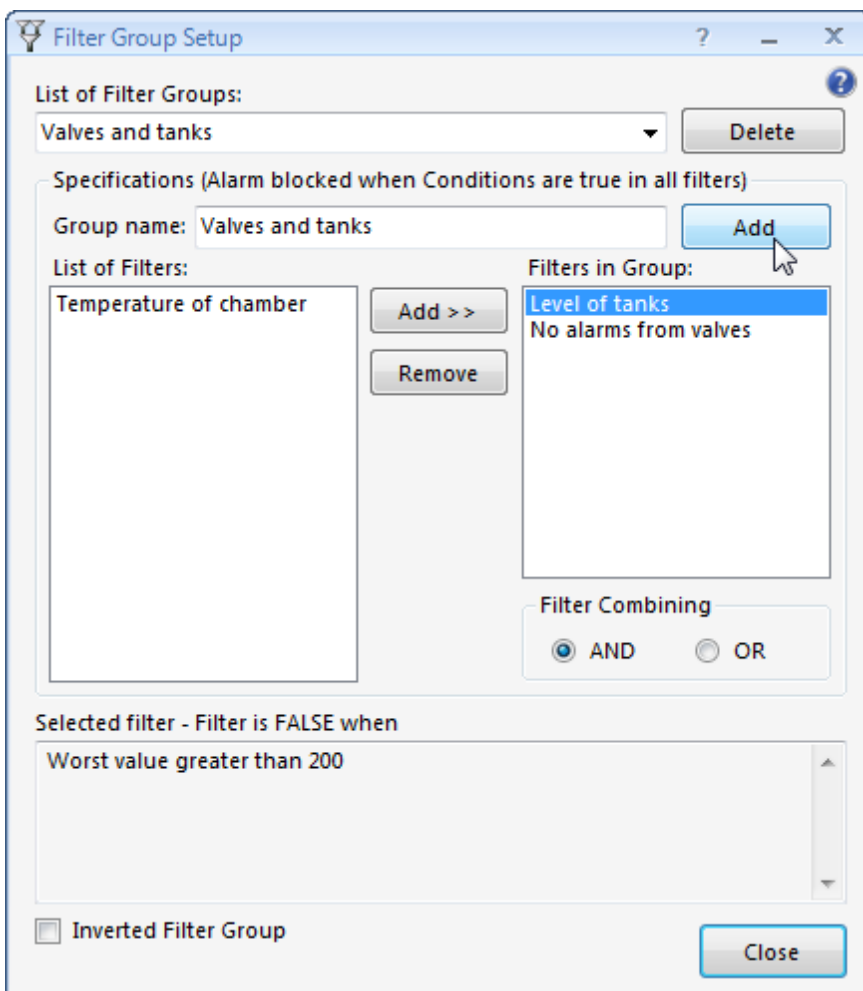
Field name	Description
Daily	With this recurrence pattern selected, you can choose to duplicate the duty with an interval of days for example every third day. If you select the option every weekday, all the weekends will be skipped.
Weekly	With this recurrence pattern selected, you can choose to duplicate the duty on certain weekdays. For example every Monday and Thursday and you can choose whether it should be every week or more less frequently.
Monthly	With this recurrence pattern selected, you can choose to duplicate the duty on a certain date of the month for example the 24th of every second month, or you can choose to duplicate the duty at a certain weekday during a month, for example the second Thursday every third month.
Yearly	With this recurrence pattern selected, you can choose to duplicate the duty on a certain date of the year for example the 24th December, or you can choose to duplicate the duty at a certain weekday occurrence of a given month, for example the third Monday of April.

Range of recurrence

Field name	Description
Start	<p>This shows when the duty recurrence should start. The default date is the one on which the original duty plan is located, but it can be changed to what is desired.</p> <div style="border: 1px solid gray; padding: 5px; margin-top: 10px;"> <p>If this date is changed the original duty plan will be moved to the first day of the recurrence.</p> </div>

Field name	Description
Start time	Shows when the recurrence can begin. No time prior to this time will include any recurrence for this duty plan.
End time	Shows the exact time after which the recurrence will no longer appear on the last day.
No end date	If this option is selected, the recurrence will keep continuing until it is changed by the user.
End after (number) occurrences	With this option you can limit the recurrence to a maximum number of recurrences.
End by (date)	With this option you can end the recurrence at a certain date.
Remove Recurrence	When you click this button, any previous added recurrence for the selected duty plan will be removed from the calendars.

5.4 Filter Group Setup



Overview


The **Filter Group Setup** dialog box is used to define new or existing filter groups. Filter groups allow you to collect several different alarm filters into one group and then attach the group to an alarm recipient.

For a step-by-step procedure on creating and using filter groups see [Create and use filters in the duty calendar](#) (page 37).

Precondition

A number of filters must already have been created in the Filter Setup (page 71) dialog box, before you can use this function.

Where do I find it?

Click the **Configuration** ribbon. Under the filter options, click the **Filter Groups**  button.

Field Help

Field name	Description
List of Filter Groups	Click the drop-down list to view a list of all currently existing filter groups in Notifier .
Delete	Deletes the filter group displayed in the drop down list to the left.
Group name	Shows the name of the current filter group. When creating a new filter group, start by typing a name for it in this field, and then click the Add button.
List of filters	Here, all the existing filters are listed so you can get an overview of which filters to include in the filter group.
Add/Remove	With the cursor, select a filter in the list of filters and click Add to add to filter to the group. Similarly, select a filter in the filters in group list and click Remove , to remove a filter from the group.
Filters in Group	Shows a list of all the filters currently included in the filter group.
Filter combining AND/OR	This options allows you to toggle whether more filters (AND) should apply simultaneously for the filter group to be activated, or if just one filter (OR) from the filters in the group list should apply for the filter group to be activated.
Selected filter	When a filter is selected in one of the two lists, this field shows the details of the filter, Property-Operator-Value.
Inverted Filter Group	<p>If NOT selected, alarms will be blocked when they meet the defined conditions for the filter group. If this option IS selected, alarms will be passed to Notifier when they meet the defined conditions.</p> <div style="border: 1px solid gray; padding: 5px; margin-top: 10px;"> <p>When toggling this option, notice that the text next to the Specifications title is changed so that it reflects the actual setting.</p> </div>

5.5 Filter Setup



Overview

The **Filter Setup** dialog box is used to create new or edit existing filters. The purpose of a filter is to sort out all minor or unwanted alarm messages, so that monitoring can be as simple and effective as possible.

For a step-by-step procedure for creating and using filters see Create and use filters in the duty calendar (page 37)

Where do I find it?

To access the **Filter Setup** dialog box, you can proceed in two ways:

- Click the **Duty Planner** ribbon. Under the filter options group, click the **Edit/Create filters**  button. The Filter Setup dialog box is opened.
- Click the **Configuration** ribbon. Under the filter options group, click the **Add filter**  button to open the dialog box.

Field Help

Field name	Description
List of filters	Click the drop-down list to view a list of all existing filters in Notifier .

Field name	Description
Delete	Deletes the filter displayed in the drop-down list to the left.
Name	Shows the name of the current filter. When creating a new filter, start by typing a name for it in this field, and then click the Add button.
Invert condition	<p>If NOT selected, alarms will be blocked and filtered out when they meet the defined conditions. If this option IS selected, alarms will be passed on to the recipients when the alarms meet the defined conditions.</p> <div style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <p>When toggling this option, notice that the text next to the Specifications title is changed so that it reflects the actual setting.</p> </div>
Remove condition	Removes a condition from this filter. To do so, mark a condition in the specifications list and click the Remove button.
AND / OR	When a filter has more than one condition, this option toggles whether the alarm should meet all the conditions (AND) for the filter to apply, or only meet one of the conditions (OR) for the filter to apply.
Property	<p>In this field you choose the property that the condition applies to for example Object name or Alarm no. etc.</p> <div style="border: 1px solid gray; padding: 5px; margin: 10px 0;"> <p>The *.Alarm no.,*Object name etc. means that if any alarm with the defined condition already exist the filter will apply.</p> </div>
Operator	Choose which area of values the filter should react on. For example with letters/words should the alarm then have the exact name as given here for the filter to apply, or does it only need to be a fragment of its full name. With values it could be operators such as "greater than" a given value, or "in between" two given values, etc.
Value	Here you type the exact value/letter, etc. for which the operator, as explained above, should apply.
Add Condition	Adds a condition with the attributes as explained in the four fields above. The condition is then shown in the Conditions list.

5.6 Operator Profile



Overview

The **Operator Profile** dialog box is used to create new or edit existing operator profiles.

For a step-by-step procedure on creating operator profiles see [Create and add operators to duty calendars](#) (page 26).

Where do I find it?

To access the **Operator Profile** dialog box you can proceed in two ways:

- Click the **Duty Planner** ribbon. Under the **Operator** options, click the **Edit/Create operators**  button.
- Click the **Configuration** ribbon. Under the **Operator** options, click the **Add Operator**  button.

Field Help

Field name	Description
List of operators	Click the drop-down list to view a list of all existing operators.
Delete	Deletes the operator profile displayed in the drop-down list to the left.
Name	Shows the name of the selected operator. When creating a new profile, start by typing a name here and then click the Add button.
Phone	Enter a mobile phone number to make Notifier able to forward alarms as text messages to this operator.

Field name	Description
E-mail	Enter an e-mail address for the operator, either as a supplement to the phone number or as an alternative. It is not possible for operators to acknowledge alarms by e-mails.
Description	Here you can key in a description of the operator for example "Week-end operator", etc.
Filter	You can also apply a filter to the operator. Click the drop-down arrow to get a list of available filters. More info?

5.7 Server Configuration

Overview

The **Server Configuration** dialog box is used to define the servers which handle the communication between **Notifier** and IGSS.

For a step-by-step procedure on configuring a server station see [Server connection to IGSS](#) (page 29).

Preconditions

One or more PCs must have been set up to run as a server in the **System Configuration** module before these settings can be added.

Where do I find it?

Click the **Configuration** ribbon and click the **Add Server Station** button .

Field Help

Field name	Description
List of Server stations	Click the drop-down list to view a list of all existing server stations in Notifier .
Delete	Deletes the server station displayed in the drop-down list.
Server station name	Shows the name of the selected server station. When creating a new server station, start by typing a name and then click the Add button.
Host name	This is the PC name of your IGSS system server.
IP address	This is the IP address of the IGSS system server PC, the one chosen above.
Port	Select the communication port for the server PC. Normally you can leave the default setting of 12399. If you chose another communication port, remember to open the port number in your fire-wall in Windows.
User name	Enter the user name of an Notifier user, who is authorized to establish connection to an IGSS server. These users are defined on the Access Control of the System Configuration module.
Password	Enter the associated password.
Filter	You can apply a global filter to the server. This will allow a filter to apply on all alarms handled by this particular server. Click the drop-down arrow to get a list of available filters.
Description	Here you can type additional descriptions of this server.
Disable	Disables the selected server.

Chapter 6: Reference and Lookup

6.1 Conventions in this Manual

The following typographical conventions are used:

Convention	Description	Example
User interface element	When referring to labels and names in the user interface.	The Data Management tab.
User input	When the user has to type specific data in IGSS.	Type the following description: Incoming flow in Tank 2
Module name	When referring to a module in IGSS	Open the Definition module.
Note	A note emphasizes or supplements important points of the main text. A note provides information that may apply only in special cases.	By default, the timestamp is in universal time format, UTC ¹ . This can be changed in the Driver Log Filters dialog box.
Tip	A tip suggests alternative methods that may not be obvious in the user interface. A tip also helps the user in working more effectively with IGSS. A tip is not essential to the basic understanding of the text.	Alternative to this simple find function, you can also filter on text in the messages in Driver Log Filters dialog box.
Warning	A warning is an important note that is essential for the completion of a task. In some cases, disregarding a warning may result in undesirable functionality or loss of data.	If you disregard the System alarm, you may risk loss of data in the LOG and BCL files.



6.2 Getting Help in IGSS

IGSS comes with a comprehensive help system designed to help both system designers and operators to get started with IGSS as quickly as possible.

Documentation overview

The IGSS documentation includes the following items:

¹Universal Time Coordinated (formerly Greenwich Mean Time), used as the basis for calculating time in most parts of the world. IGSS uses this time format internally in the database. You can switch between UTC and local time by enabling or disabling the "UTC" field in various dialog boxes in the system.

Documentation item	Description
Getting Started	An introduction to IGSS and its most fundamental terms and features. Getting Started is intended to get you up and running as fast as possible. The manual provides a system and architecture overview followed by a number of real-life use cases you can go through before building your first real IGSS project. The manual is available in Adobe Acrobat format (.pdf).
Module help	For each module there is a help file with the same name as the module itself, for example, Igss.chm for the Master module, Igss.exe. The help file is invoked by clicking the  in the upper right corner of the module. The Table of Contents will then allow you to browse through the topics.
Dialog box help	For each dialog box there is a help topic with the following standard information: <ul style="list-style-type: none"> • Overview • Preconditions • Where do I find it? • Field help Dialog box help is invoked by clicking the help button  in the upper right hand corner of the dialog box.
Thematic help	IGSS also provides thematic help. When there is a special theme that requires special attention from the user, a dedicated help file is provided. Examples include "Driver-Specific Help" and "Database Administration Help".

Where are the help files located?

The IGSS help files are located in the appropriate language folder under the [IGSS InstallPath]. The help files are available in English at release time.

The paths to the help files are:

Language	Path
English	[IGSS InstallPath]\ENG
Danish	[IGSS InstallPath]\DAN
German	[IGSS InstallPath]\DEU

Translated help files

Selected help files have been translated into Danish and German. If you require help files in your language, please contact 7T.

Help updates

The IGSS help files are continuously updated and improved. Check regularly with the **IGSS Update** module in the IGSS Start menu.

6.3 Version Information (IGSS Help System)

© 7-Technologies A/S, IGSS Version 9.0

The IGSS help files are based on software build number 10305 (initial release)

English help files

To update the help files, you must activate the **IGSS Update** module in the IGSS Start menu. There must be a connection from the PC to the Internet. Every time **IGSS Update** is run, IGSS help files as well as IGSS system files will automatically be updated on the PC from the 7-Technologies web server.

You select the languages you want to update in the **Tools** menu of the **IGSS Update** module.

If you are not able to update the IGSS system directly via the Internet, the alternative is to download the updates from the 7-Technologies website as zip files. These can then be transferred onto a CD or USB memory stick, which is then the medium used to update on site.

After running **IGSS Update**, the build numbers in various IGSS modules may change to a higher number. This signifies that the module in question has been updated with newer files. Build numbers consist of four digits, where the first digit represents the year and the last three represent the day number in the year in question. The build number can be seen in the **About** dialog box which can be activated from the **Help** menu.

An example:

Build number = 10305

10 = the year 2010

305 = The 305th day of the year

Chapter 7: Glossary

A

Application menu

The Application menu is the first ribbon in the IGSS Master module. Click the icon to drop down the menu. The menu contains items that were typically found in the File menu in previous versions of IGSS. In most modules, an "Options" item allows the user to define global module settings. The Application menu was introduced in the Microsoft Office 2010 package. It replaces the Application button (nicknamed Doughnut) which was introduced in IGSS V7 and V8.

C

call off

When an alarm is activated it will be pending to be acknowledged. The call off is when the operator acknowledges the alarm.

D

descriptor

A descriptor is the graphical display of an object. IGSS includes many types of descriptors including: - Built-in standard symbols - Animated symbols (Symbol Factory library) - Graphics and animation - Drawing symbols - Windows controls - ActiveX controls An IGSS object can be represented with different descriptors on different diagrams.

duty calendar

A calendar which contains the duty plans.

duty plan

A time block that shows which operators that are on duty in the given time period.

Q

Quick Access Bar

You can customize the Quick Access Bar to include the functions you use most frequently. Simply drag the relevant function from the ribbon to the Quick Access Bar.

R

Ribbon

The Ribbon is a new term/element in the Microsoft universe. The Ribbon replaces the well-known toolbars in applications. The Ribbon provides quick access to the most commonly used functions in the application. The Ribbon is divided into logical groups (the tabs) and each tab is divided into sections (the blocks in the tab). The Ribbon is context-sensitive which means that only relevant functions are accessible dependent on the current user action.

S

SCADA

Supervisory Control & Data Acquisition

SMS Alarms

An SMS Alarm is an alarm which has been sent to AMS from an SMS service. Some 3rd party SCADA/HMI systems feature an SMS service.

U**UTC**

Universal Time Coordinated (formerly Greenwich Mean Time), used as the basis for calculating time in most parts of the world. IGSS uses this time format internally in the database. You can switch between UTC and local time by enabling or disabling the "UTC" field in various dialog boxes in the system.

W**workspace**

An area of the screen, similar to the desktop, where all the user tasks are executed, i.e. the duty calendar.