

# EXO4 Web Server 2010

User Guide



THE CHALLENGER IN BUILDING AUTOMATION

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# Chapter 1 Introduction

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## What is EXO4 Web Server

<b>EXO system</b>	EXO4 Web Server is used to get access to an EXO system via the Internet. Real-time values from controllers as well as alarms and logged data can be inspected. The EXO system includes stations, controllers (systems).
<b>Access</b>	An EXO4 Web Server user must identify himself with login name and password, and is thereafter given access to the parts of the EXO system that he has permission to. The permissions are defined by the administrator of the system and can also include the right to change values, e.g. setpoint values

## User Categories

<b>Access level</b>	Every user must belong to a user category which defines the user's access level.
<b>User categories</b>	<p>There are six user categories in EXO4 Web Server:</p> <ul style="list-style-type: none"><li>❑ <b>System installer</b> is a user that have full access to the system, including permission to configure EXO4 Web Server.</li><li>❑ <b>Operator group</b> is a group of users, e.g. a company, that has access to one or more stations and their controllers (systems).</li><li>❑ <b>Administration groups</b> have the same permission as Operator groups, but they have also permission to add, change, and remove users. User administration is described in the chapter <i>User Administration</i>.</li><li>❑ <b>Station</b> users have access to <u>one</u> station with its controllers.</li><li>❑ <b>System</b> users have access to one system (controller).</li><li>❑ <b>Variable</b> level users have access to some variables in a system.</li></ul>

## Concepts

	In this manual a number of concepts are used.
<b>System</b>	A system corresponds normally to a controller.
<b>Station</b>	A station contains one or more controllers, whereof one is the station master.

## Requirements for Accessing EXO4 Web Server

<b>Web browser</b>	A Web browser is used to access EXO4 Web Server. You should use Internet Explorer 7.0 or later.
<b>Flash</b>	Normally the pictures that are displayed are made in Flash, which means that Flash player plug-in 7.0 or later must be installed. On the main window of EXO4 Web Server, there is a link that you can use to download Adobe Flash Player.
<b>Settings</b>	For settings in web browsers, see the chapter <i>Settings</i> .

# Chapter 2 Settings

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## Security Settings in the Web Browser

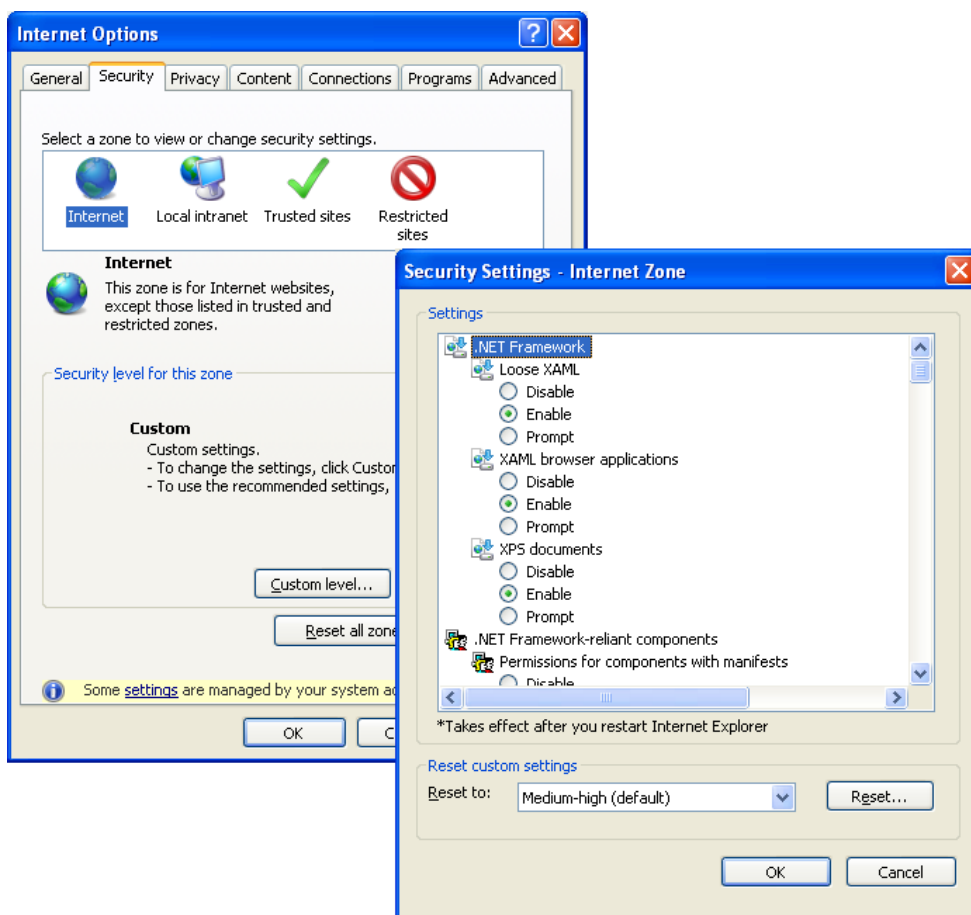
### Function well

For the EXO4 Web Server to function well, you have to make some security settings in the web browser.

### Security settings

Security settings in Internet Explorer is made in the following way:

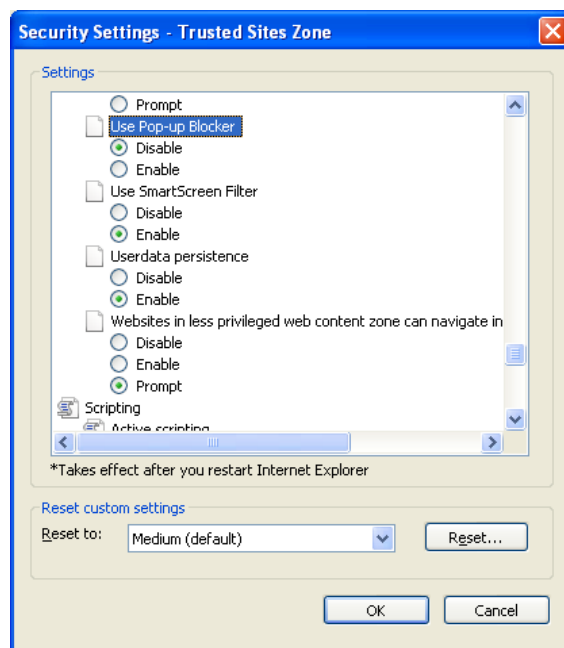
- ☐ Select the menu command **Tools – Internet Options** in Internet Explorer and select the **Security** tab.
- ☐ Select the zone for which you want to check and maybe change security settings. The zone depends on from where you are to access the EXO4 Web Server. Note that the export function in the historical window requires that the zone is Internet.
- ☐ Click on the button **Custom level...**



## Blocking of pop-up windows must be disabled

### Disable

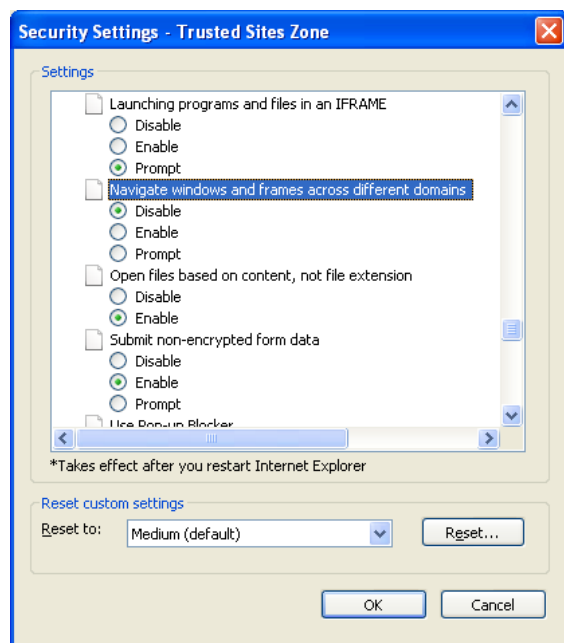
One important function that can be activated is blocking of pop-up windows. Inactivate the function **Use Pop-up Blocker**.



## The web pages split into different windows

### Disable

Make sure that the setting **Navigate windows and frames across different domains** is disabled in the web browser that will surf to the EXO4 Web Server. Otherwise, the web pages may be split into different windows.



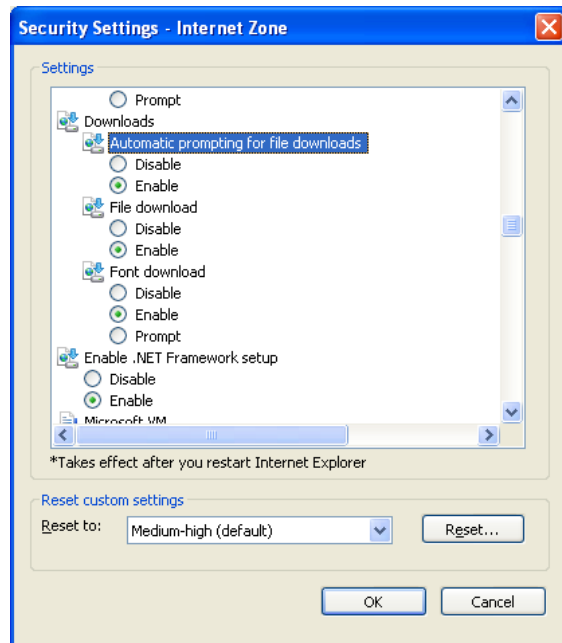
## Export Function in the Historical Chart window

### Allow

For the export function in the historical chart window to function, you have to allow automatic file download on the computer.

### Enable

This is done in the security settings for downloads by enabling **Automatic prompting for file downloads**.

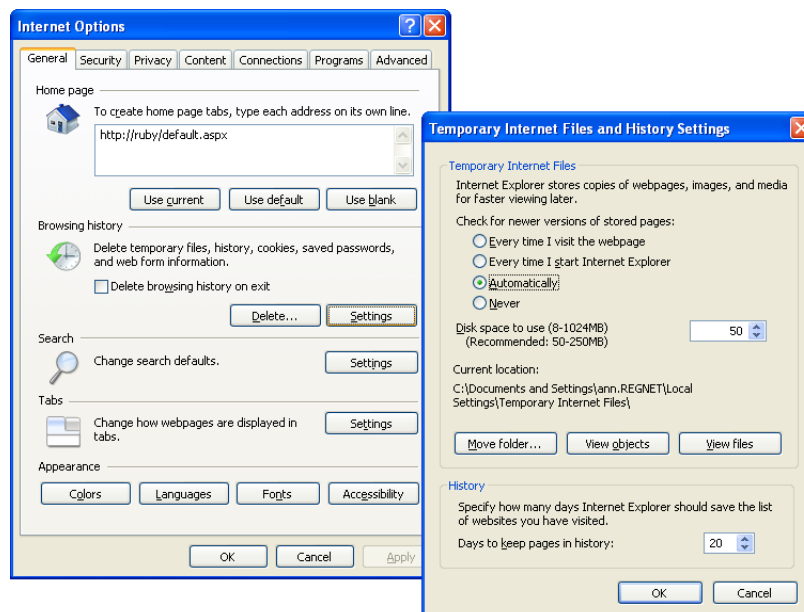


## Updated measured values are not displayed

### Shut off

To ensure that measured values and pictures are not displayed in the web browser, you should shut off the cache storing of the web browser.

- ☐ Select the menu command **Tools – Internet Options** in Internet Explorer.
- ☐ On the **General** tab, click on the button **Settings** in **Browsing history**.
- ☐ Select **Automatically**.





# Chapter 3 Starting and Logging in

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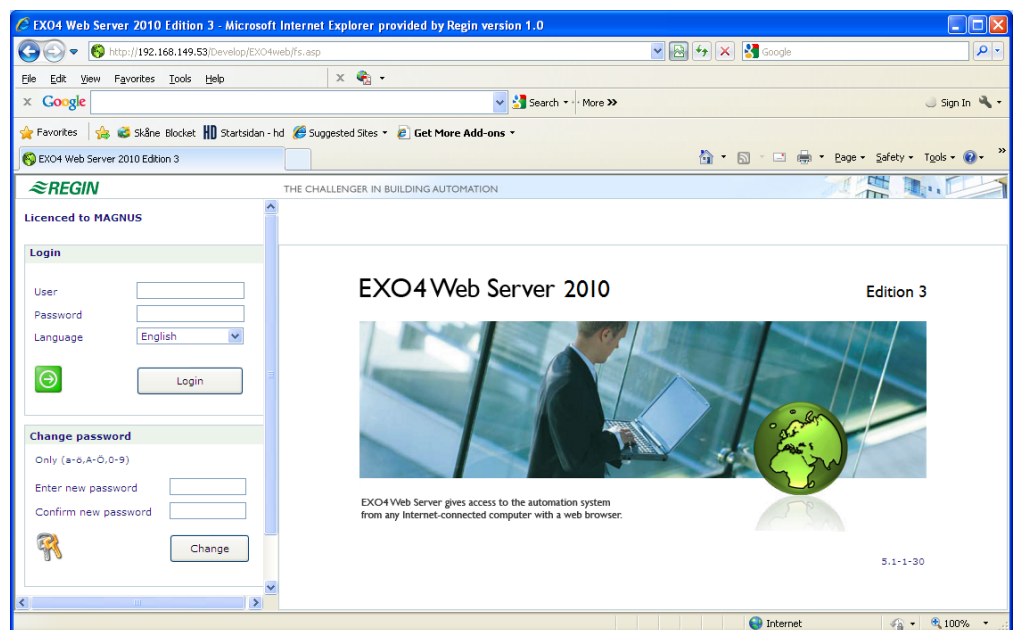
## Surf to EXO4 Web Server

### Login page

You may be able to surf to the login page of EXO4 Web Server in the following ways:

- ☐ The integrator may have created a shortcut on the desktop.
- ☐ You can enter the IP address given by the integrator in the address field of the web browser.
- ☐ The EXO4 Web Server may be incorporated with the web site of your company with, for example, a button or a hyperlink, which you can use to open the login page.

## Logging in



### User and password

Logging in is done using **User** and **Password** so that the information shown about the EXO system is filtered depending on the user's access level.

### Password

In EXO4 Web Server 2010 edition 1 and later, the password may only contain characters (a-ö, A-Ö) and digits. It can contain a maximum of 10 characters.



User names and passwords are case-sensitive, which means that they should always be entered exactly as they were registered.

### Three tries

A user has three tries when logging in. If the wrong login name and/or password are entered three times in a row, the attempt is interrupted and the user gets an error message. Then a new attempt to log in can only be done after 20 minutes or after restarting the web browser.

<b>Language</b>	In the Language list, the available installed languages are shown. The chosen language is stored in a so-called cookie on the user's computer, and at the next login, the chosen language will automatically be selected.
<b>Change password</b>	The user can change his password. Enter the user name and the current password. Then enter the new password and confirm it in the corresponding fields. Enter the user name and the new password to log in.
<b>Main window opens</b>	When a log-in has been accepted, the main window for the logged-in user is opened.

# Chapter 4 Main Window

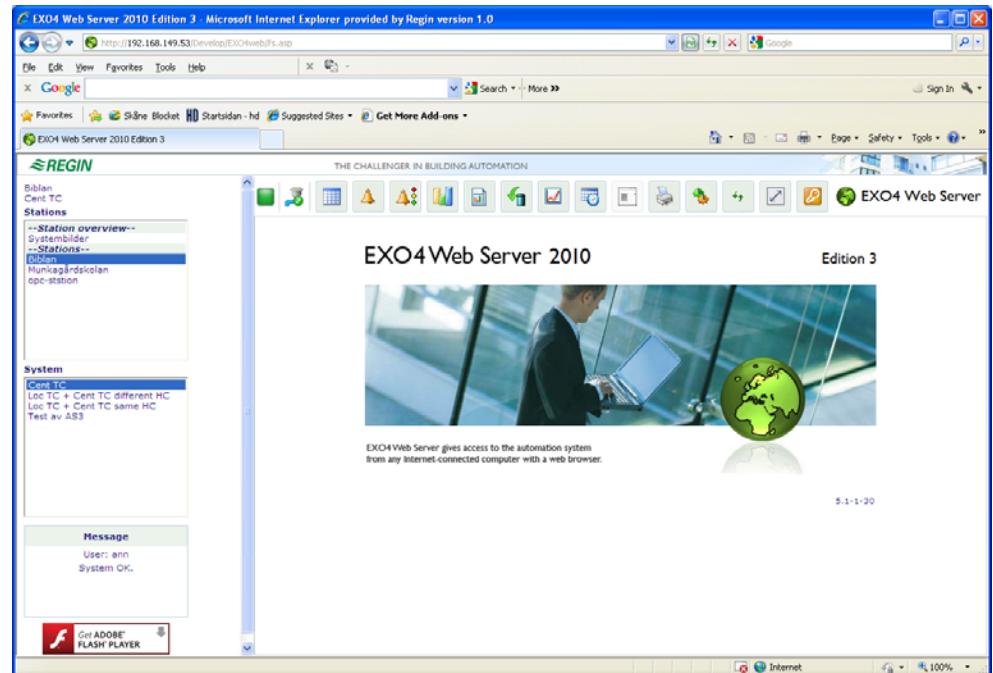
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## Select

The first window that opens after logging in is the main window of EXO4 Web Server where you can select the stations and systems that are available for the logged-in user.

## Functions

In the toolbar, there are links to the functions available for the user. If a specific station or system is selected, the functions available for that station or system are displayed.



The function key F11 can be used to make the EXO4 Web Server run in full screen mode in the web browser. There are also buttons in the toolbar for this function. See the section **Toolbar** below.

## Left part

The left part of the window shows Stations, System and Message.

- ☐ Stations and System show the stations and systems that are available for the logged in user.
- ☐ Message shows the logged-in user and any system message that the system administrator has configured. This can e.g. be a message concerning run-time disturbances or such things.

# Toolbar

## Buttons

The toolbar contains several “buttons”. The availability of these buttons depends on the user’s access level and the selections that have been made in the left part of the main window. They are grayed if they are unavailable.

## Descriptions

Descriptions of the toolbar buttons:



**Alarm** shows the current status of the selected system.



**Status** shows the connection status of the station.



**Value table** opens a table with values when the system has established contact with the controller. This button is available only if display of value table has been configured for the selected system.



**Alarm status** opens a window for handling of the system’s alarms.



**Alarm panel** opens a panel that shows the 10 latest active alarms, i.e. alarms that do not have the status normal.



**Historical Chart** shows historical curves for selected signals.



**Reports** opens a simple report generator where you can create reports.



**Read log now** updates the EXO4 database with logs from the selected controller (system).



**Real time trend** displays real-time values in a chart.



**Time Channels** shows the status of the time channels, both local and central ones.



**Document** displays attached documentation of the selected system, if any.



**Print** prints the process picture.



**Configuration** opens the configuration part of EXO4 Web Server. This button is only available for users with the access levels *System installer* and *Administration group*.



**Update** updates (refreshes) the web page.



Used to run full screen.



Used to run normal screen.



**Log out** logs out the current user.

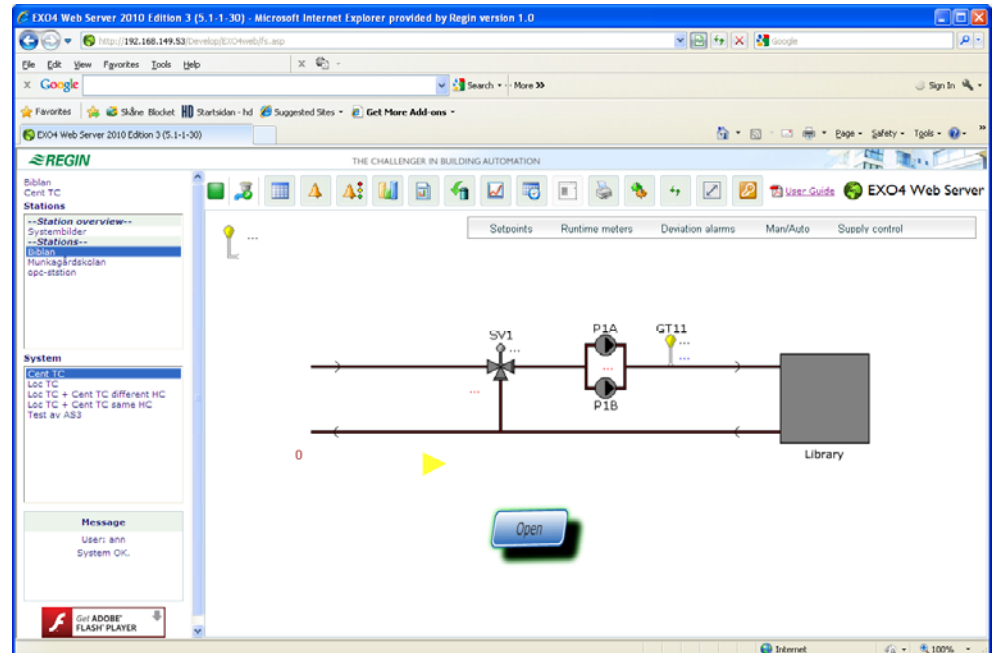
# System Process Pictures

## Select system

After selecting Station and System, the process picture and the functions that are available for the selected system are displayed. The station's master controller is always the one that is displayed first in the list with systems, and is shown automatically when the station has been selected. This picture is normally an overview picture.

## Process picture

EXO4 Web Server can handle process pictures of different kinds: static pictures in .JPG or .GIF format, as well as dynamic pictures created in Flash (.SWF files). Below is an example of a process picture created in Flash.



## Static picture

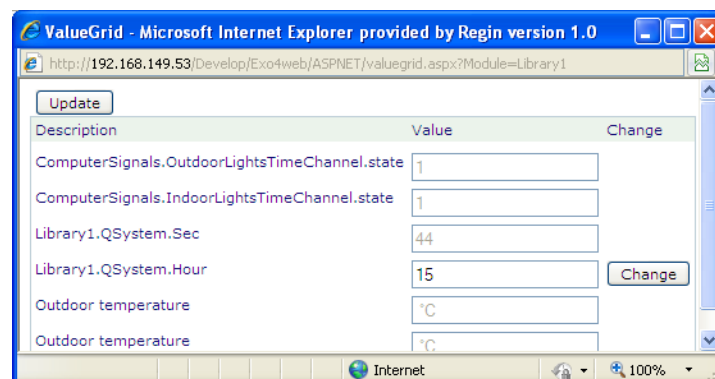
When a static picture (.JPG or .GIF) is used, all variables that are registered for the system are displayed in a value table.

## Dynamic picture

When a dynamic process picture created in Flash is used, only changeable values are displayed in a value table. If the user has permission to change values of variables, e.g. setpoints, it can be done in the table.

## Value table

The *Value table* is opened with the button  when a system is selected in the main window.

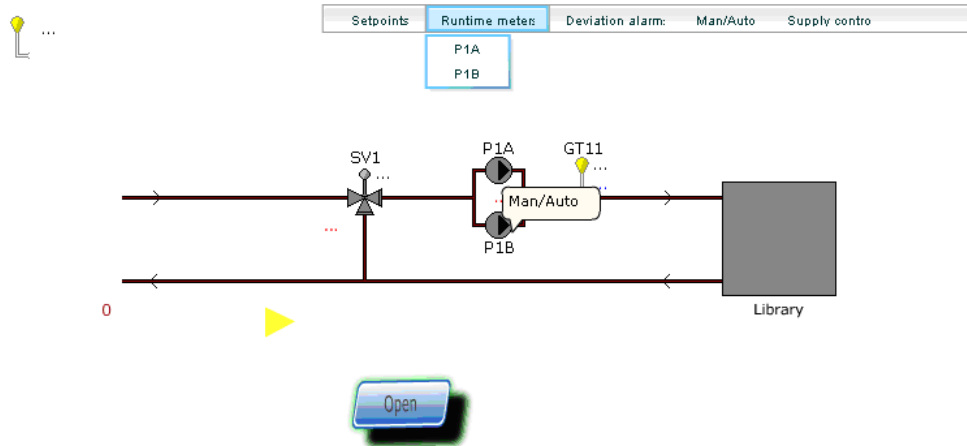


## Changeable values

A variable that can be changed by the user have a **Change** button. Change the value and click on the button.

## Flash Pictures

**Click areas and menus** Normally, process pictures made in Flash have click areas and a menu.



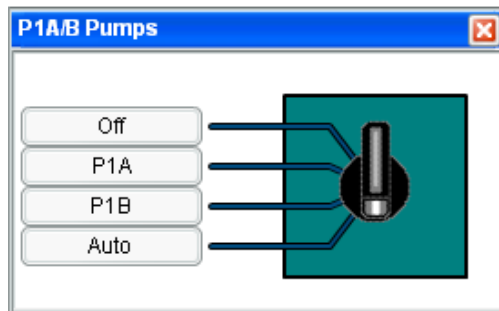
### Menu

Above the process picture, there is a menu. When an item in the menu is clicked, a submenu may open.



### Click area

In the above process picture, there are also click areas, e.g. the one at P1B. When you click on a click area, a window is opened above the main window. In this case, the below window.



# Regio System Pictures

## Examples

Below are examples of Regio system pictures:

Overview

Actual/Setpoint

Input/Output

Settings

Manual/Auto

**Room Controller**

Controller state:Occupied

Room temperature:°C

Room setpoint:24,0 °C

Setpoint adjustment:0,0 °C


Open window:No

Output heating:0 %

Output cooling:0 %

Fan speed:Off

Sum alarm status:Alarmed



Overview

Actual/Setpoint

Input/Output

Settings

Manual/Auto

**General**

Change-over temperature:°C

Presence:No

Open window:No

Condense:No

Forced ventilation:Off

**Actual**

Controller state:Occupied

Room temperature:°C

Room setpoint:24,0 °C

Setpoint adjustment:0,0 °C

Output heating:0 %

Output cooling:0 %

Fan speed:Off

**Setpoint**

Setpoint frostprotection:[10,0 °C](#)

Deadband Stand-by:[3,0 °C](#)

Setpoint heating:[25,0 °C](#)

Setpoint heating Unoccupied:[15,0 °C](#)

Setpoint cooling:[25,0 °C](#)

Setpoint cooling Unoccupied:[31,0 °C](#)

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# Chapter 5 Alarms






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## Alarm Classes

<b>Alarm points</b>	Each alarm point belongs to a so-called alarm class, class A, B or C.
<b>Degree of importance</b>	The class is primarily used to indicate the alarm's degree of importance. The alarm class A is the most important, while class C is the least important.
<b>Differences</b>	<p>There are also functional differences:</p> <ul style="list-style-type: none"><li>❑ The alarm classes A and B require that the alarm has returned <b>and</b> is acknowledged to return to the status <b>Normal</b> again. The alarm class C does not require acknowledgement, but can be acknowledged all the same.</li><li>❑ If Nimbus Alarm Server is used, the default is that SMS messages or e-mails are sent when alarms of the alarm class A are triggered. Nimbus Alarm Server can also be used for acknowledgements with re-calls.</li></ul>

## Alarm Status

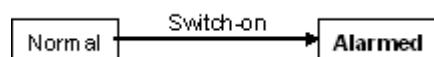
<b>Alarm status</b>	Alarm status denotes the current status of the alarm. There are five different statuses, which in the Alarm Panel are displayed with the following symbols:
---------------------	---

	<b>Normal</b>	The initial state of the alarm point, i.e. no alarm is activated.
	<b>Alarmed</b>	The status of the alarm point when the alarm has been triggered, i.e. an alarm is activated.
	<b>Returned</b>	Class A and B alarms that have returned (no active alarm), but have not been acknowledged.
	<b>Acknowledged</b>	An alarm point of class A or B that is still switched-on, but has been acknowledged.
	<b>Blocked</b>	A temporarily blocked alarm point. Switch-ons and switch-offs are not registered.

## Alarm Events

<b>Alarm event</b>	An alarm event is a change of an alarm point's status. The most basic alarm events are switch-on and switch-off:
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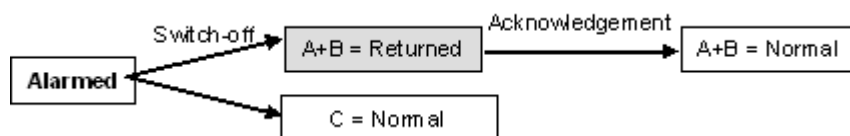
- ❑ **Switch-on:** An alarm is triggered, i.e. the alarm condition is switched on (becomes true), and the status of the alarm point becomes **Alarmed**.



- ❑ **Switch-off:** An alarm is returned, i.e. the alarm condition is switched off (becomes false). When an alarm is switched off, the class of the alarm point determines what will happen:



- Class C alarm points get the status **Normal** as do acknowledged alarms of the classes A and B.
- Unacknowledged alarms of class A or B get the status **Returned**.

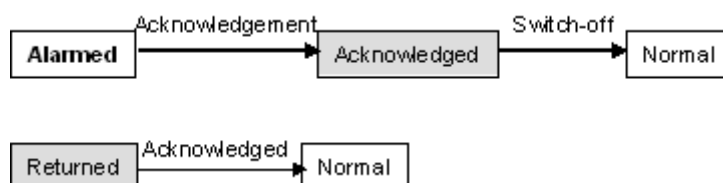


### Alarm maneuvers

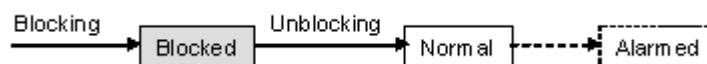
There are three types of alarm maneuvers: acknowledgement, blocking and unblocking. All three maneuvers are performed by the user, either on the controller's display, in EXO4 or in EXO4 Web Server. These three different maneuver types are also considered to be alarm events.

❑ **Acknowledgement:** When an alarm is acknowledged, the following will happen:

- Not yet returned alarms get the status **Acknowledged**.
- Returned alarms get the status **Normal**.



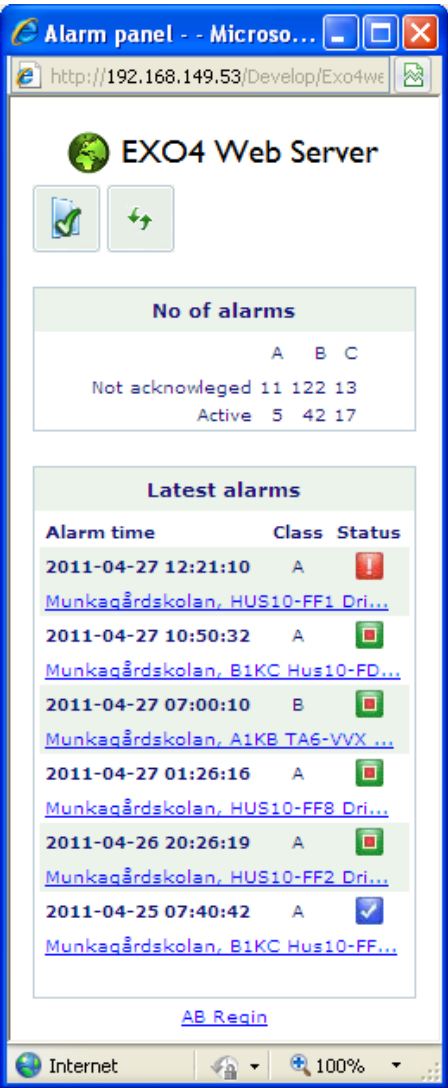
- ❑ **Blocking:** When an alarm is blocked, it will get the status **Blocked**. Switch-ons, switch-offs and acknowledgements will be ignored. The only alarm event that will be registered is unblocking.
- ❑ **Unblocking:** When a blocked alarm is unblocked it will get the status **Normal**. If the alarm is still switched on, it will get the status **Alarmed** (after the configured alarm delay time).



# Alarm Panel

## Open

The *Alarm panel* is opened with the button  when a system is selected in the main window.



## No of alarms

The number of alarms in the alarm panel shows always the total number of alarms in the system in EXO4 Web Server 2010 edition 2 and later. Earlier, only alarms from the controllers that the user had access to were counted.

## Active alarms

The panel shows also the 10 latest active alarms with alarm status symbols for the stations and systems that the user has access to. Active alarms are alarm points that do not have the status *Normal*. The alarm status is displayed with symbols, which are described in the above section *Alarm Status*.

## Alarm status window

When an alarm text in the alarm panel is clicked, the alarm status window opens.

## Buttons

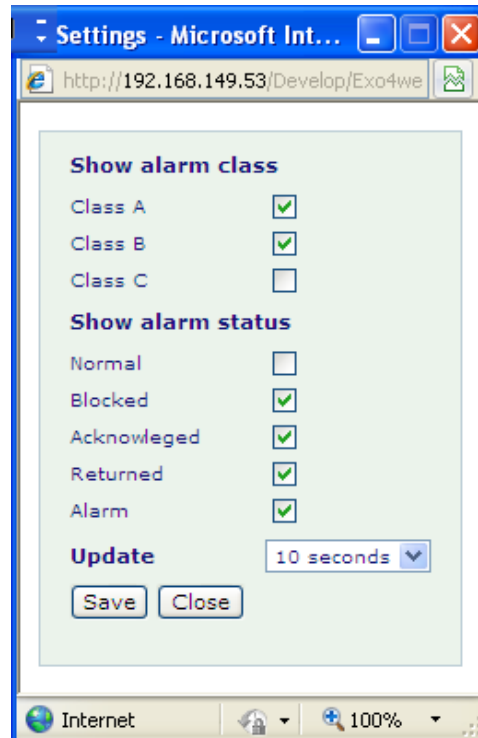
The following buttons are available in the alarm panel:



**Update** is used to get the latest alarms.



**Setup** opens a window where the properties of the alarm panel can be set.



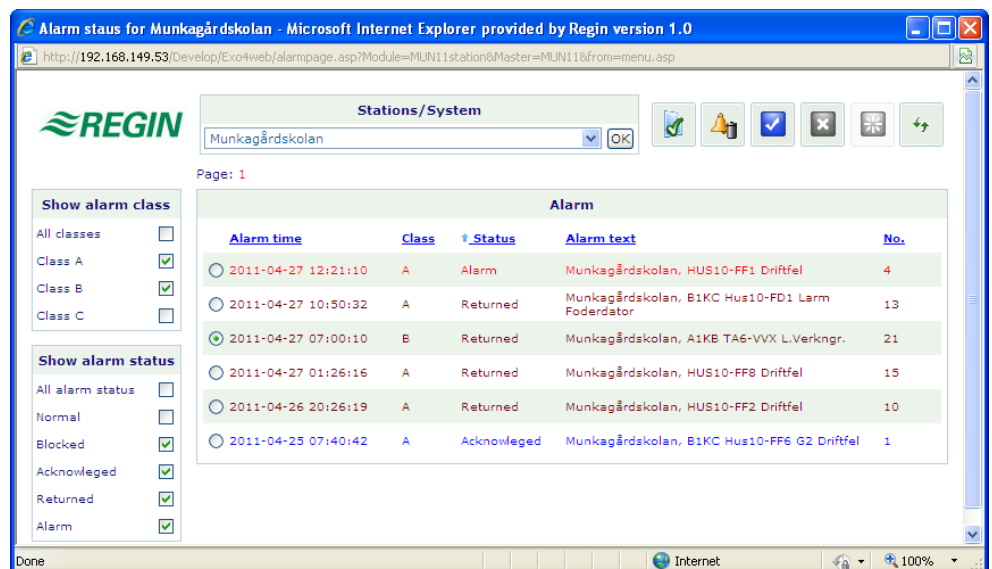
## Alarm Status Window

### EXO4 Database

The *Alarm status* window shows the current information from the EXO4 alarm database for every alarm point in the selected system, alternatively for all systems the user has access to.

### Open

The window is opened with the button **Alarm status** in the main window or by clicking on an alarm in the alarm panel.



### Filter and sort

Received alarms can be selected based on class and status, and be sorted on alarm time, class, status, alarm text or number by clicking on the desired title.

## Select

An alarm is selected by checking the radio button in front of the alarm in the list.

## Alarm maneuvers

To be able to acknowledge, block and unblock alarms, the user must have the access level Operator group or higher.

## Buttons

The following buttons are displayed for a selected alarm when a connection to the physical controller exists:



**Setup** opens a window with more information about a selected alarm.

The button Reset is used to set *No of alarms* to zero.



**Alarm Events** opens the window *Alarm Events*.



**Acknowledge** is used to acknowledge a selected alarm with the status alarmed or returned.



**Block** is used to block an alarm point.



**Unblock** is used to unblock a blocked alarm point.



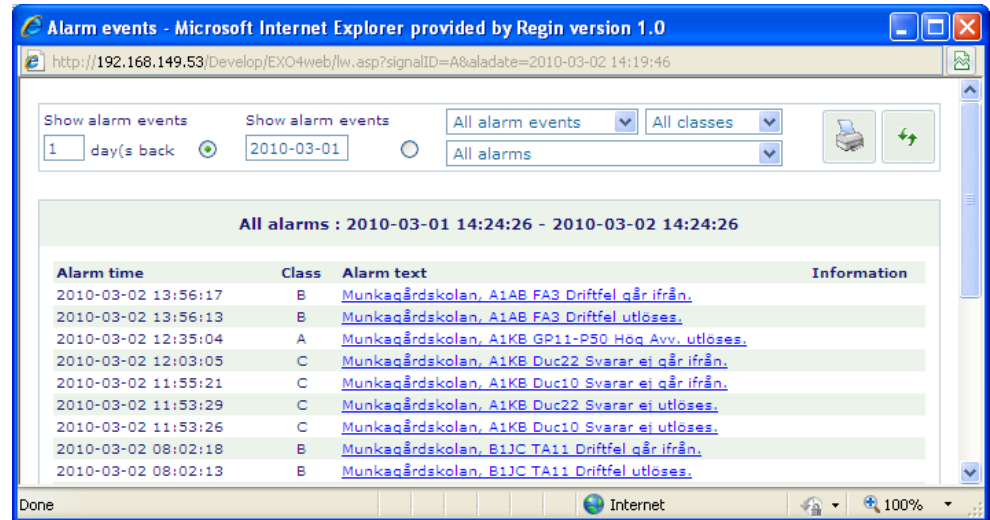
**Update** is used for getting the current alarm status.

# Alarm Events

**Detailed information** Detailed information about alarm events, i.e. times for switch-ons, switch-offs, acknowledgements, blockings, and unblockings, is given in the Alarm Events window.

## Open

The window is opened with the button **Alarm events** in the Alarm Status window



## Filter

In this window, you can choose the period of time for which you want to see alarm events, either as number of days backwards, or for a specific date. You can make filtering on alarm event type, class and alarm points.

## Buttons

The alarm events window have the following buttons:



**Print** prints the alarm events report on the default printer.



**Update** refreshes the window, e.g. after making new selections at the top of the window.


# Chapter 6 Historical Chart

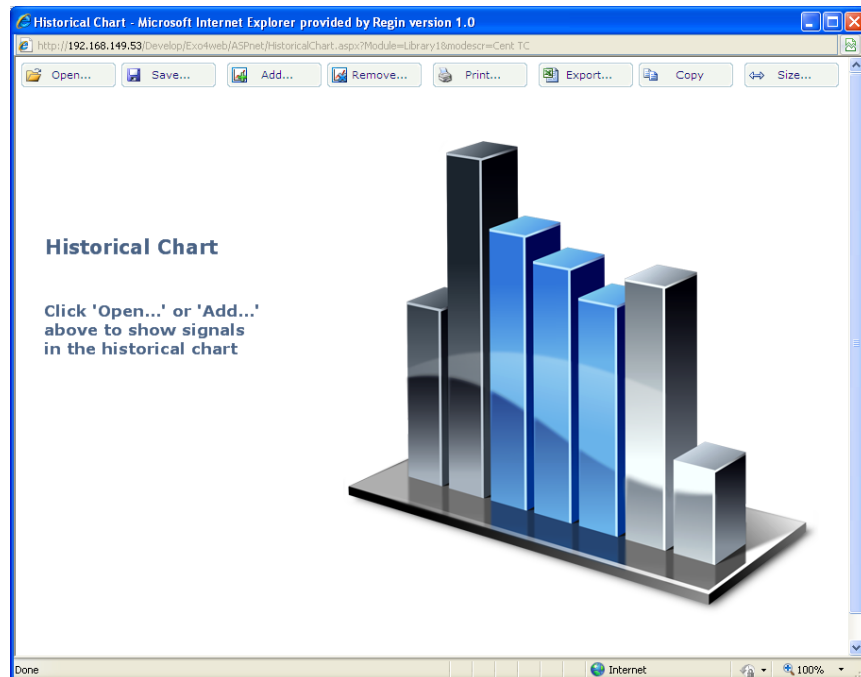
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## Charts and table

The window *Historical Chart* is used to visualize the historical data that is stored in the EXO4 database. It shows both charts and a table with values for the selected signals.


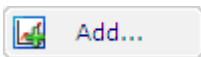
## Open

The historical chart window is opened with the button  in the main window. The below window will be displayed.



## Two ways

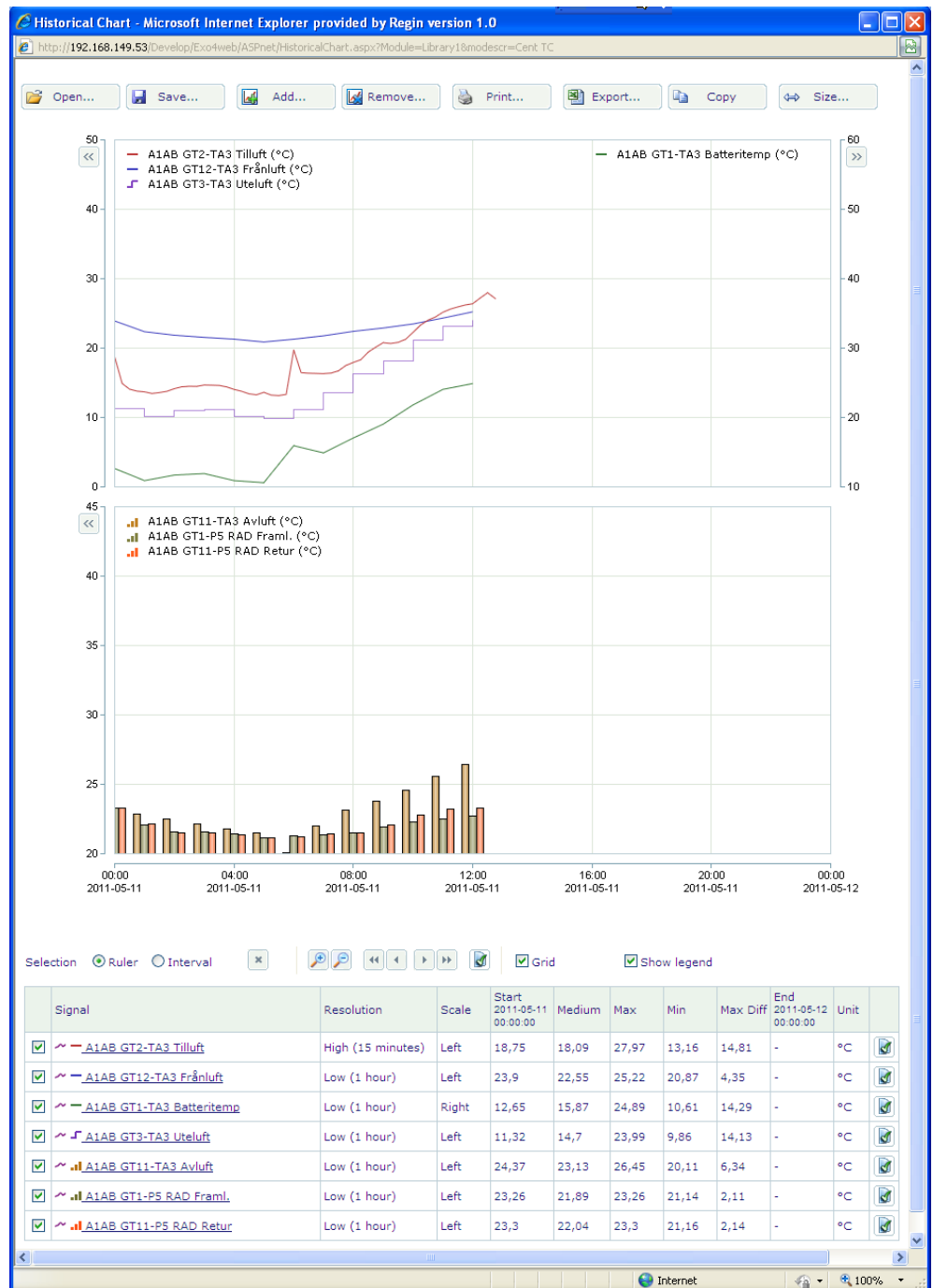
You can open a historical chart window in two ways:

- ☐ The button  in the toolbar is used to open a previously created chart with selected signals and chart type.
- ☐ The button  in the toolbar is used to create a new chart by selecting signals, graph type, start date etc. You can even select to show signals in more than one chart in the same window.

These options are described in the below section *Toolbar*.

## Example

An example of a historical chart window:



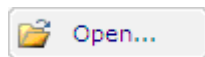
## Signal names

The names of the signals in the chart and table will be the ones that were configured by the integrator. If you uncheck the checkbox **Show legend**, the names of the signal will not be displayed in the chart.

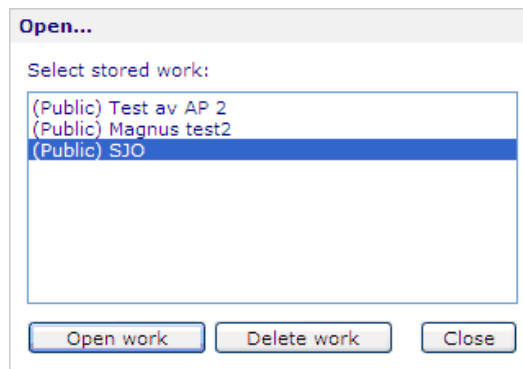
# Toolbar

## Buttons

At the top of the historical chart window there is a toolbar with the following buttons:

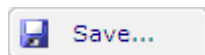


Opens a previously saved chart window with selected signals and graph type.



Since you should not be able to see files belonging to a system that you do not have access to in EXO4 Web Server 2010 Edition 3 and later, old saved files are displayed in red. These files should be resaved. The system does not overwrite the old file as it does not have the same name any more. In the list, it is not the file name that is displayed. When you have resaved the files, the red files should be removed.

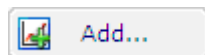
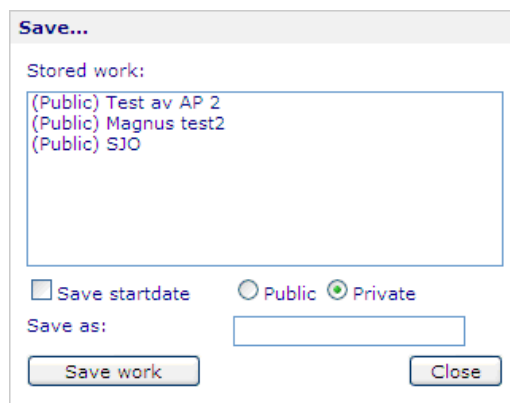
Templates are saved in their systems. This means that you can only see the templates that belong to the selected system.



Saves the settings for the displayed chart window.

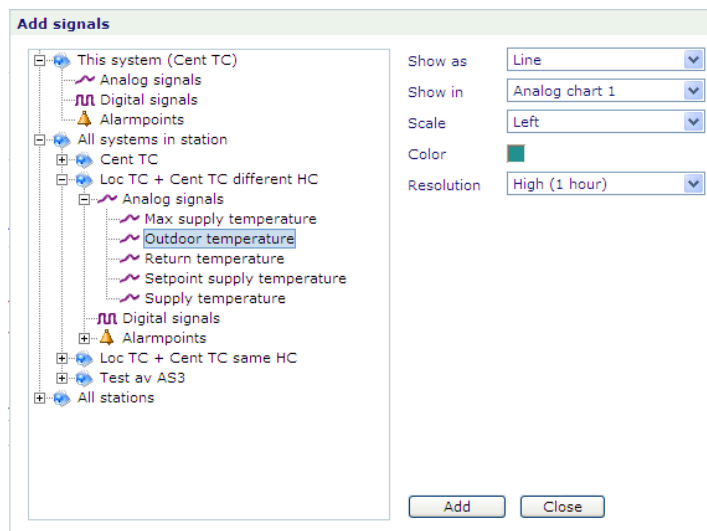
You can save it either as Private, i.e. belonging only to yourself, or as Public, i.e. with access for other users.

If you save the start date, the chart will open with this date, otherwise it will be today's date.



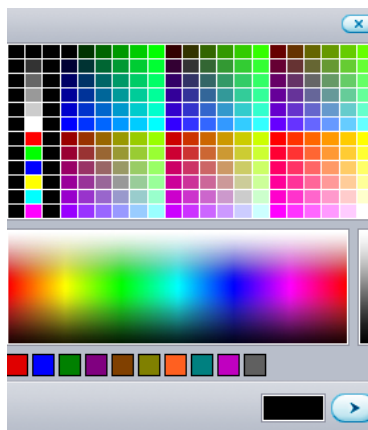
Adds signals to the current chart window.





You can select the following for a signal:

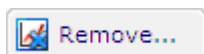
- ☐ **Show as:** Select graph type. If you want to show more than one signal in bars, the signal you selected first will decide which type of bar is displayed, i.e. *Bar*, *Bar with values*, *Stacked bar* or *Stacked bar with values*.
- ☐ **Show in:** Select in which chart you want the signal to be displayed graphically (Analog chart 1 or Analog chart 2). You have the possibility to show two charts in the same view.
- ☐ **Scale:** Select if you want the scale to be displayed beside the left or the right Y-axes. The scale that is displayed is decided by the first selected signal.
- ☐ **Color:** You can select another color for the graph than the pre-selected by clicking on the color box.



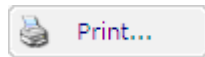
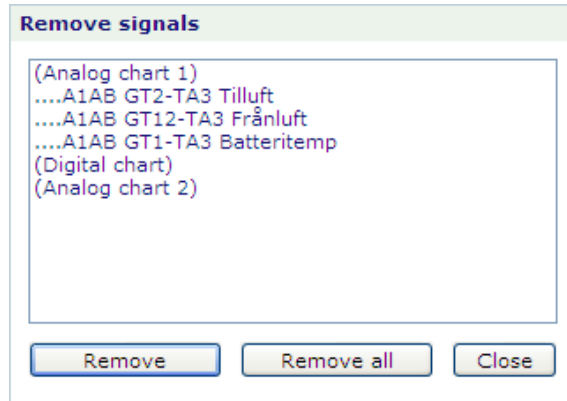
- ☐ **Resolution:** Select resolution, e.g. 15 minutes, 1 hour.

Click on **Add**. The Historical Chart window will be displayed with the added signal.

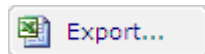
You can open the dialog again to add more signals to the chart.



Removes one or more signals from the chart.



Prints the chart window to the default printer, just as it looks on the screen.



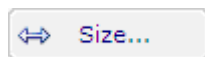
Copies the chart to MS Excel. A download file dialog opens.

Note! You may have to enlarge the columns in Excel to be able to see the values.

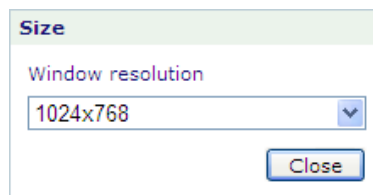
Note also that you have to allow automatic file download for the export function in the historical chart window to function. See the chapter *Settings*.



Copies the values in the chart to the clipboard. You can then paste it into e.g. MS Word.





Changes the screen resolution. You can use it if you cannot see the entire chart. When you have changed it, it will be saved in a cookie, so EXO4 Web Server will remember the size the next time you open a chart.










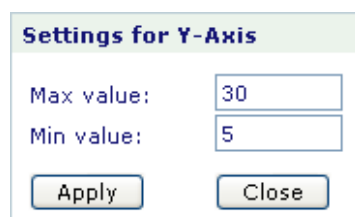
## Buttons at the top of the chart

### Above Y-axes

The buttons  and  at the top of the chart's y-axis are used to show buttons for zooming and intervals. The buttons are displayed horizontally beside the y-axis.



- ☐ The buttons   are used to zoom in and zoom out, respectively.
- ☐ The buttons     are used to move the y-axis up and down.
- ☐ With the button , you get a dialog where you can make settings for the y-axis.



# Buttons below the chart



## Above the table

Above the table, there are navigation buttons for the X-axes and other selections with the following functions:

- ❑ If you select **Ruler** and click in the chart on e.g. a line or a bar (i.e. when you have a hand cursor), you will get a ruler in it, and the table values will reflect the selection. If you click on another place in the chart, the ruler will be moved. Note that the ruler will always be placed on a measured log point value, so the ruler may appear to jump to another place than the one you are actually clicking on.
- ❑ If you select **Interval** and click on two places in the chart as described for the ruler, you have marked a time period, and the table values will reflect the selection.
- ❑ The button deletes the selection for the ruler.
- ❑ The buttons are used to zoom in and zoom out, respectively.
- ❑ The buttons are used to move one period or one step, backward or forward.
- ❑ With the button , you get a dialog where you can select start date and interval for the X-axis.

**Navigation on X-Axis**

Startdate:

Interval:

- ❑ The checkbox **Grid** is used to show and hide the grid.
- ❑ The checkbox **Show legend** is used to show the signal names in the chart.

# Signal Table

	Signal	Resolution	Scale	Start 2011-05-11 00:00:00	Medium	Max	Min	Max Diff	End 2011-05-12 00:00:00	Unit	
<input checked="" type="checkbox"/>	A1AB_GT2-TA3 Tilluft	High (15 minutes)	Left	18,75	18,09	27,97	13,16	14,81	-	°C	
<input checked="" type="checkbox"/>	A1AB_GT12-TA3 Frånluft	Low (1 hour)	Left	23,9	22,55	25,22	20,87	4,35	-	°C	
<input checked="" type="checkbox"/>	A1AB_GT1-TA3 Batteritemp	Low (1 hour)	Right	12,65	15,87	24,89	10,61	14,29	-	°C	
<input checked="" type="checkbox"/>	A1AB_GT3-TA3 Uteluft	Low (1 hour)	Left	11,32	14,7	23,99	9,86	14,13	-	°C	
<input checked="" type="checkbox"/>	A1AB_GT11-TA3 Avluft	Low (1 hour)	Left	24,37	23,13	26,45	20,11	6,34	-	°C	
<input checked="" type="checkbox"/>	A1AB_GT1-PS RAD Framl.	Low (1 hour)	Left	23,26	21,89	23,26	21,14	2,11	-	°C	
<input checked="" type="checkbox"/>	A1AB_GT11-PS RAD Retur	Low (1 hour)	Left	23,3	22,04	23,3	21,16	2,14	-	°C	

## Unselect

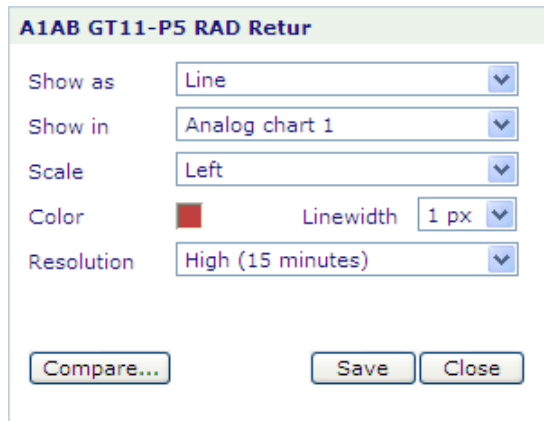
The checkbox to the left of a signal is used to select whether the signal will be displayed in the chart or not.

## Signal

Before the signal name you can see which color and type the signal has in the chart.

## Settings

If you click on a signal name or the button to the right of a signal, a dialog for the settings of the signal opens.



**A1AB GT11-P5 RAD Return**

Show as: Line

Show in: Analog chart 1

Scale: Left

Color:  Linewidth: 1 px

Resolution: High (15 minutes)

Compare... Save Close

### Line width

In this dialog, you can besides setting the same properties as in the *Add signals* dialog, also select the line width (1, 2 or 3 pixels) for all line graphs except step-line.

### Compare

The button **Compare** opens a dialog where you can select to view the same signal with different times in the same chart. See the next section.

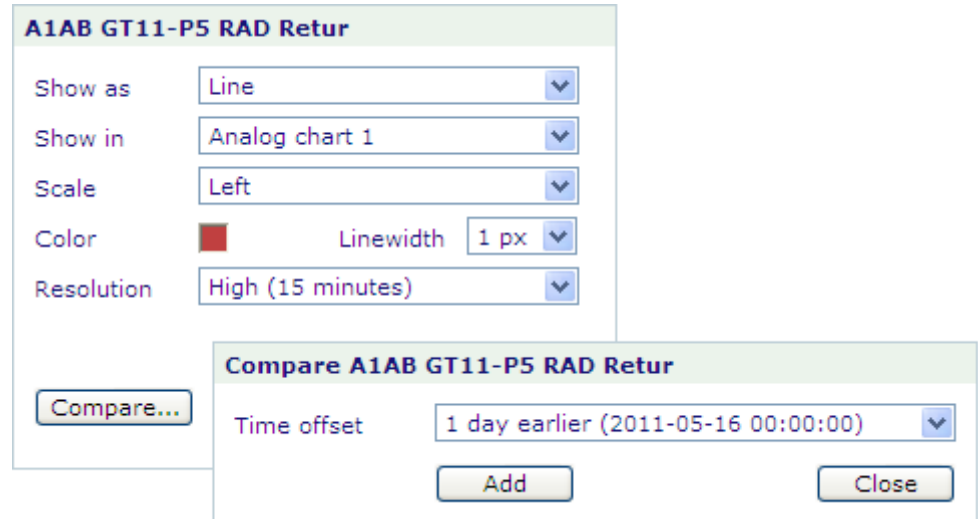
# View the same signal with different times

## Compare

You can view the same signal at different times in the same chart. You can for instance compare the values of one signal today with the same signal's values one day earlier, up to ten years. Then you can also scroll back in time.

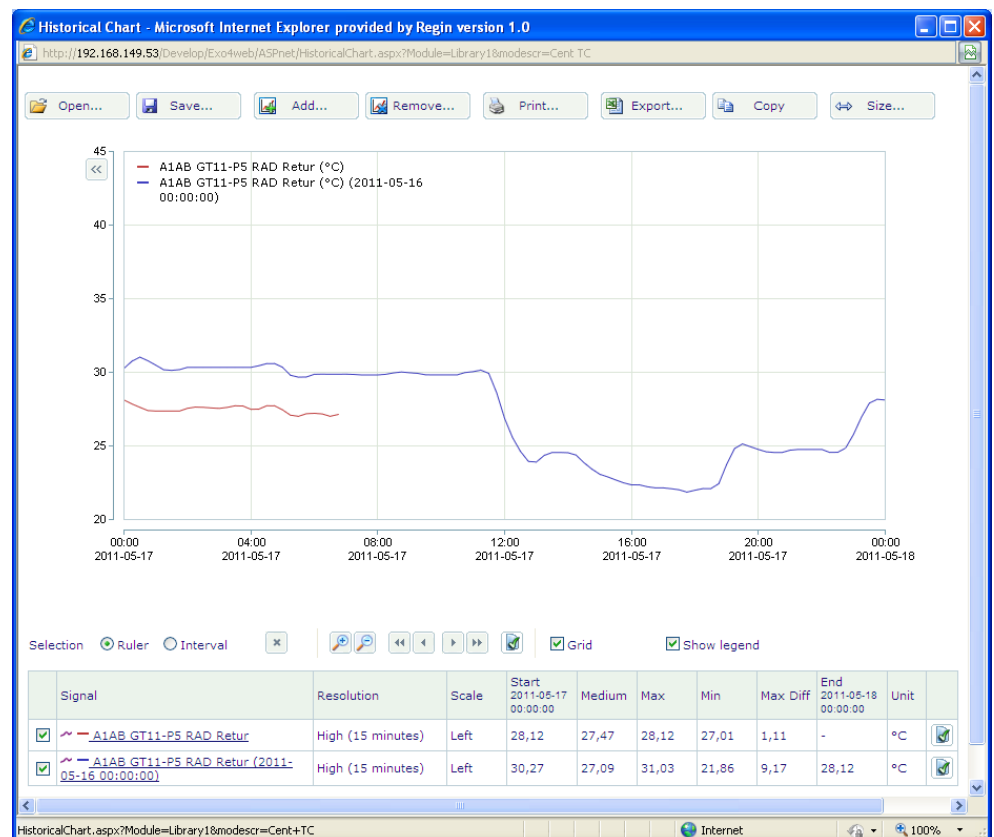
## Dialog

When you click on a signal name or the button  to the right of a signal in the signal table, a dialog for the settings opens. Click on the button **Compare**.



## Time offset

In the Compare dialog, you can state which time you want to compare the same signal with (from 1 day up to 10 years earlier).




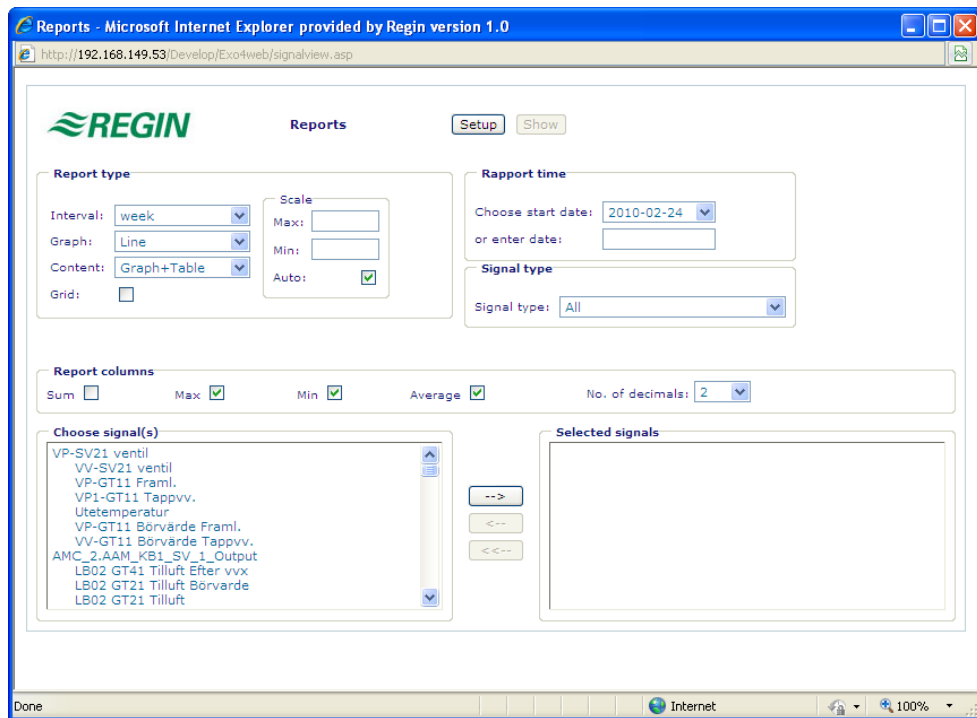
# Chapter 7 Reports

## Simple reports

You can create simple reports in EXO4 Web Server.

## Open

Click on the button  in the toolbar of the main window.



## Settings





The following settings can be made:

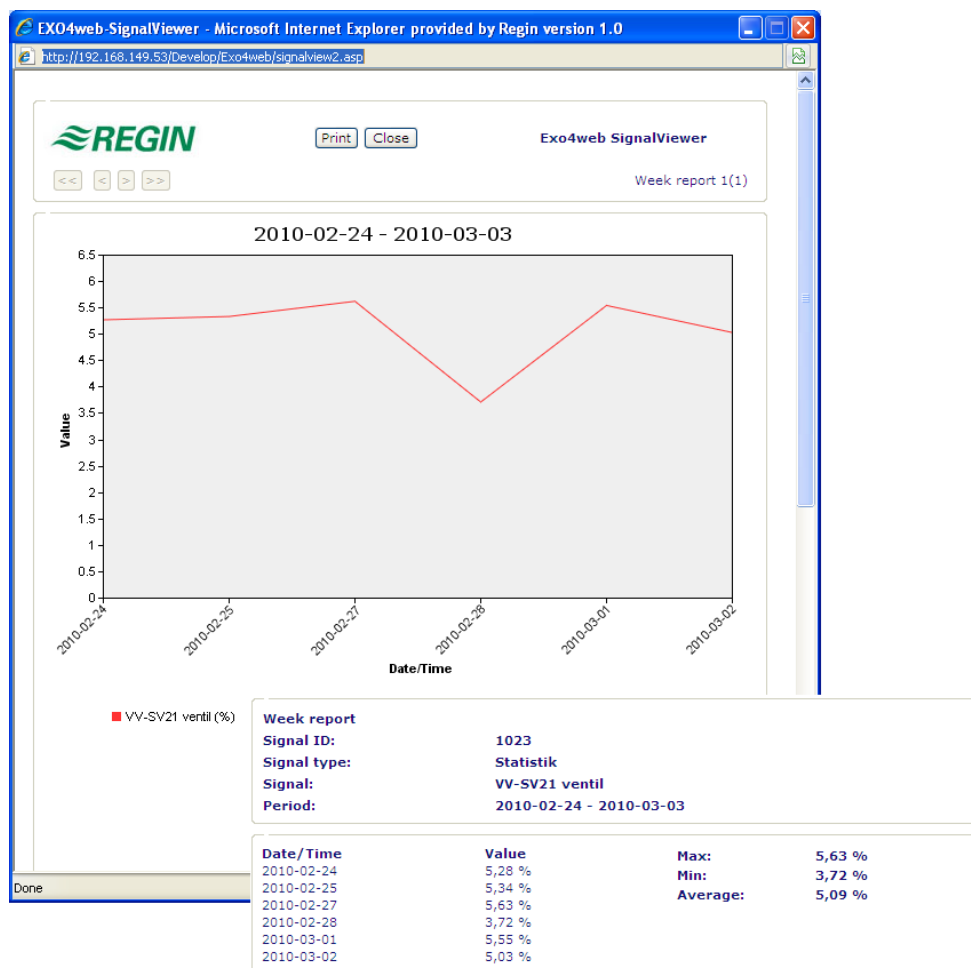
- ☐ **Interval:** Select the report period - Day, Week, Month or Year.
- ☐ **Graph:** Select the graph type - Line or Bar.
- ☐ **Content:** Select the contents of the report - Table, Graph (chart) or Graph + Table.
- ☐ **Grid:** Select if the grid is to be visible in the chart.
- ☐ **Scale:** Select the scaling alternative for the Y-axes - Auto, or enter minimum and maximum values.
- ☐ **Report time:** Select the start date of the report or enter a date.
- ☐ **Signal type:** Select the signal types that are to be visible in the signal list.
- ☐ **Report columns:** Select which report columns that are to be displayed - Sum, Max, Min, Average.
- ☐ **No. of decimals:** Select number of decimals for the signal values.
- ☐ **Choose signals:** Select signal(s) to display.

## Display

Click first on **Setup** and then on **Show** to display the report.

## Scroll

If several signals have been selected, you can scroll between the reports with the buttons   and   at the top of the report.




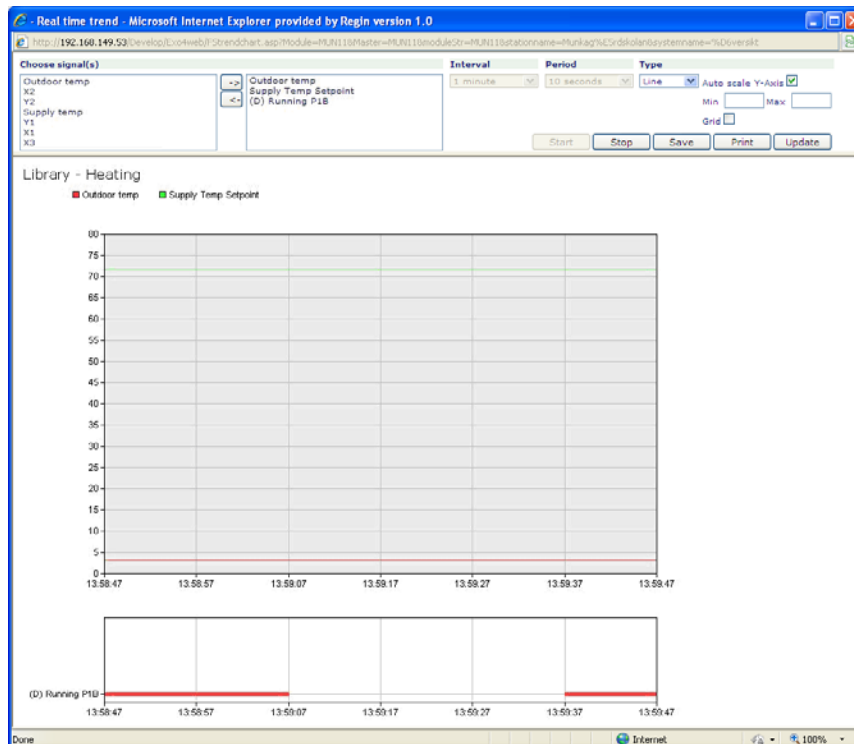
# Chapter 8 Real-time Trend

**Testing and adjustment** For testing and adjustment purposes, you may have the possibility to log real-time values.

**Analog and digital** Both analog and digital values can be logged. Digital signals are shown with a **D** in the signal list.


## Open

Click on the button  in the toolbar of the main window to open the real-time trend window.



## Settings

The following settings can be made:

- ☐ **Choose signal(s):** Select a signal that is to be displayed in the real-time trend and click on the button . A maximum of 20 signals can be selected.
- ☐ **Interval:** Select the interval that is to be displayed – from 1 minute to 12 hours.
- ☐ **Period:** Select the logging period – from 10 seconds to 30 minutes.
- ☐ **Type:** Select the graph type – Line or Bar.
- ☐ **Y-Axis scale:** Select the scale alternative for the Y-axes - Auto, or enter minimum and maximum values.
- ☐ **Grid:** Select if the grid should be visible in the chart.

## Start and stop

Click on the button **Start**. The measurement values are being collected with the periodicity that was selected, and are shown in the chart. Click on **Stop** to stop the collection.

## Save

To save logged values, click on **Save**. A file download dialog opens in which you can select where to save the text file (.csv). It can then be opened with e.g. Microsoft Excel for further handling of the saved measured values.

## Update

The button **Update** is used to refresh the chart.



# Chapter 9 Time Channels


**Time control** Time channels can be used for time control of switch-ons/offs of e.g. pumps, fans and lighting.

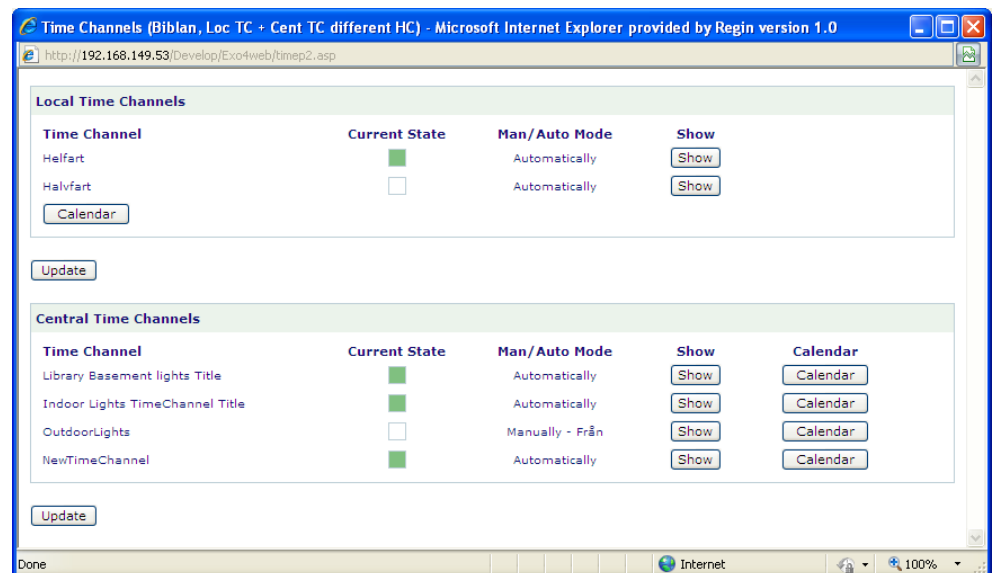
**Time channel** A time channel consists of a number of switch-on/off times for the various days of the week and holidays.




In order to change anything in the time channel windows, the user must at least have the access level operator group.

**Open**

The time channel handling is reached by clicking on the button  in the toolbar of the main window. The overview window for time channels opens.



**First window** The first window that opens shows the time channels that are configured for the system. The current on/off state and man/auto mode for each time channel are displayed. There are also buttons that open the holiday calendars. The button  opens a new window for that particular time channel. See the below section **Time Channel Window**.



The state and mode information is not dynamically updated. Press the button **Update** to get updated information.

**Two types**

There are two types of time channels:

- ☐ Local time channels are time channels that are configured in the controllers.
- ☐ Central time channels are time channels that are configured in EXO4.

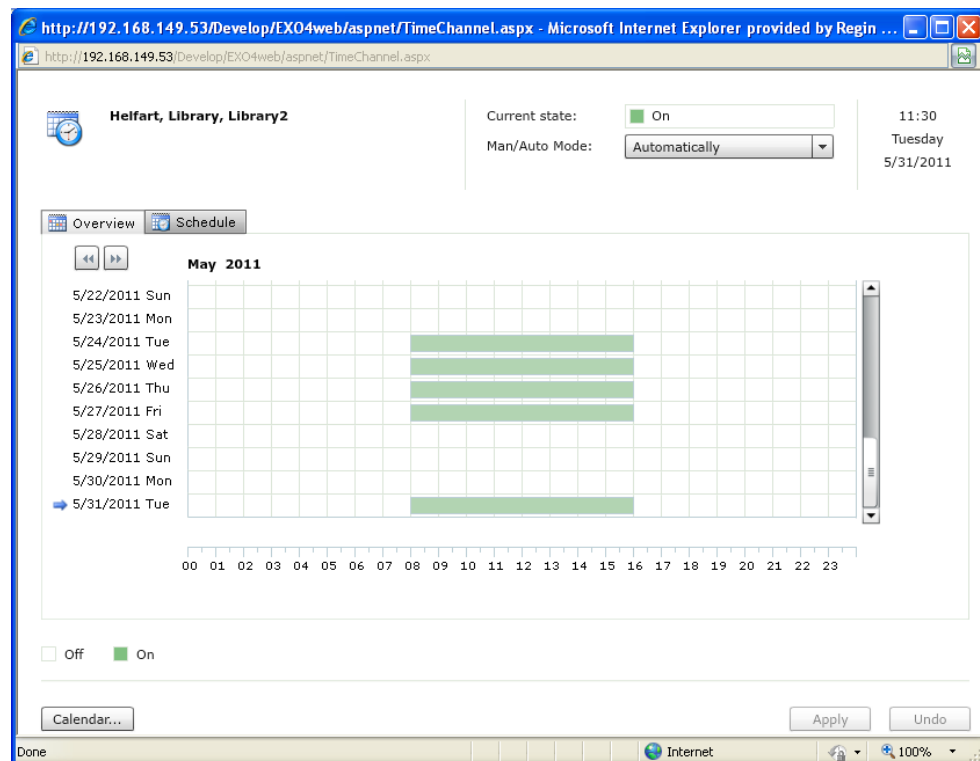
**Differences**

The windows for local and central time channels look just the same. There are however some differences that will be described in the following sections.

# Time Channel Window

## Open window

In a time channel window you can view and, if desired, change the times and man/auto mode of a time channel. Click on the button **Show** to the right of the time channel in the overview window to open a time channel window.



## At the top

At the top of the window you can see the name of the time channel, and its current on/off state and man/auto mode. The man/auto mode for the time channel can be changed.

## Date and time

The current date and time is also displayed. For a local time channel, it is the controller's time. For a central time channel, it is the computer's time.

## Two tabs

In the middle of the window, there are two tabs:

- ☐ **Overview** shows the time schedule for each day.
- ☐ **Schedule** shows the times for each weekday and also for holidays. These settings can be changed. The Calendar tab will display the time periods according to the settings on the Schedule tab and in the Calendar.

## Buttons

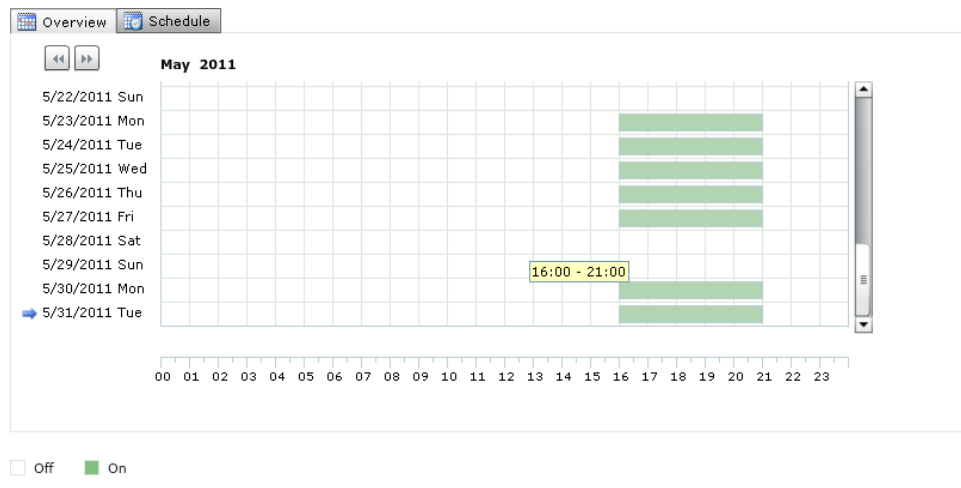
At the bottom of the window there are three buttons:

- ☐ Calendar opens the holiday calendar.
- ☐ Apply is used to confirm a change of the time channel.
- ☐ Undo is used to undo a change of the time channel.



## Overview Tab

### Current day

On the overview tab, the current day is marked with an arrow.



### Scroll between dates

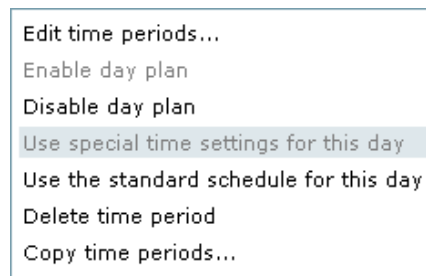
You can change the month that is displayed in the overview with the buttons   above the dates. The scroll bar to the right is used to show other days within the selected month.

### Local time channels

For local time channels, you cannot change the times for an individual day on the overview tab.

### Central time channels

For central time channels, you can change the time settings for a special day on the overview tab. Click on the desired day and select **Use special time settings for this day**.



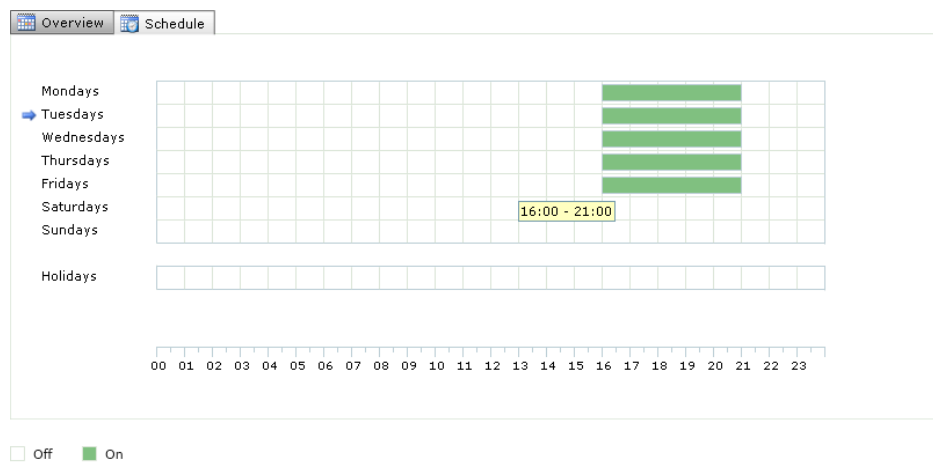
## Schedule Tab

### Period settings

The Schedule tab displays the time period settings for each day of the week and for holidays. Up to four periods can be configured for each day.

### Central time channels

For central time channels, you may be able to specify times for both Holidays and Service days.



## Change times

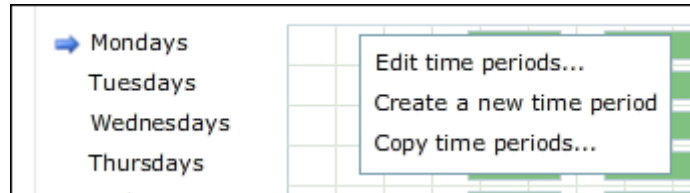
You can change the times by dragging the ends of the bars with the mouse. New periods can be created by “painting” a bar with the mouse. A time period is deleted by clicking on it and selecting **Delete** in the pop-up menu.

## Option buttons

For local time channels, you can only decide when the time channel should be On or Off. For central time channels, there may be option buttons below the schedule which you can use to select which type of day plan you want to create, e.g. On, Semi On or Semi Off.

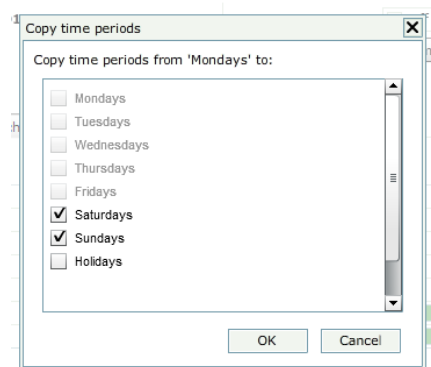
## Accuracy 1 minute

It is possible to use start and stop times with the accuracy 1 minute (instead of the default 5 minutes) in the dialog *Edit time periods* in EXO4 Web Server 2010 edition 2 and later.



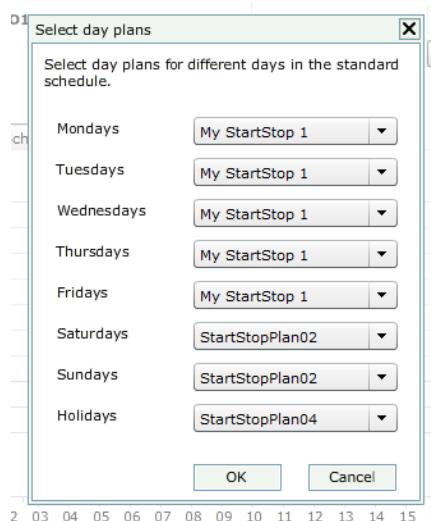
## Copy times

In EXO4 Web Server 2010 edition 2 and later, it is also possible to copy start and stop times from one day plan to others. This is done in the dialog *Copy time periods*, which is opened by clicking on a day plan and selecting this command in the menu. In the dialog, a list (with check boxes) of all day plans that you can copy to the selected day plan is shown. Both week days and special days can be copied.



## Select day plan

In EXO4 Web Server 2010 edition 2 and later you can select a day plan for a weekday in the dialog *Select day plans*, which is opened by pressing the Shift key and clicking on the icon in the upper left corner.



# Calendar


## Local time channel

For local time channels, the calendar for holidays is common to all controllers in the project.

## Central time channel

For central time channels, you can have a different calendar for each signal, and both Holidays and Service days.

## Open

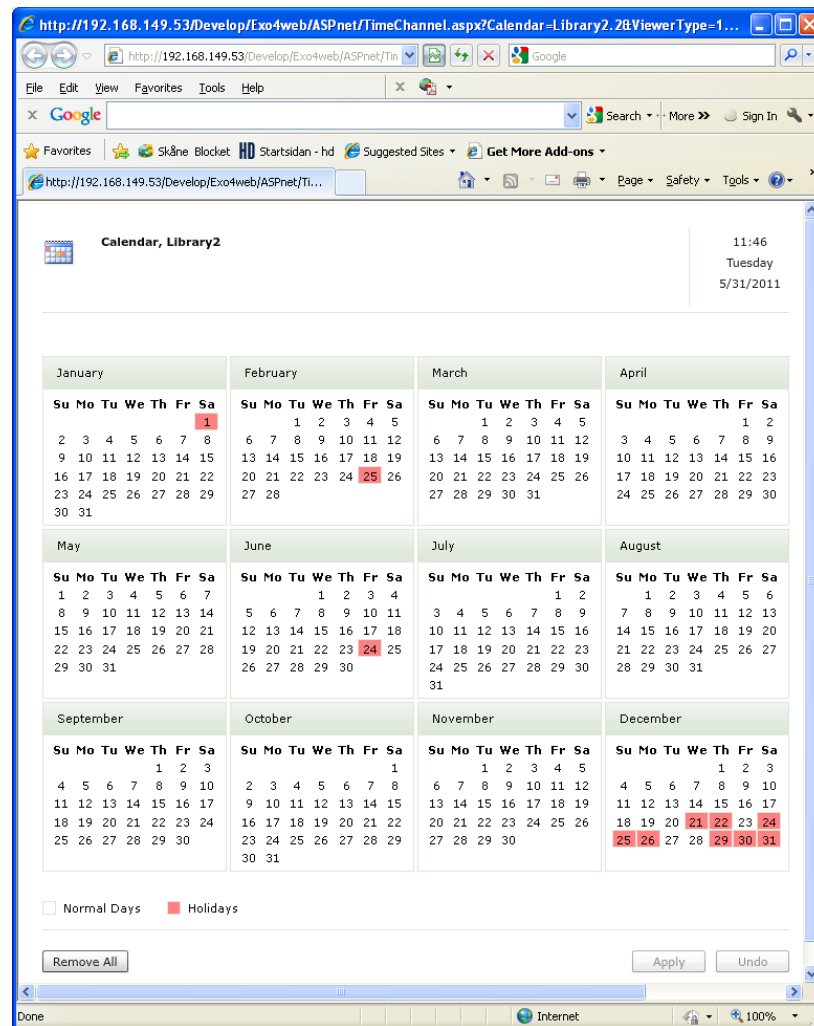
The calendar is opened by clicking on the button  , which you can find both in the window that shows all time channels, and in the window for each time channel.

## Select day

To select a day as holiday, just click on it. To remove a selected holiday, click on it again. For central time channels, which have two types of “holidays” (Holidays and Service days), select which type of “holiday” you want to create at the bottom of the window before clicking on the day.

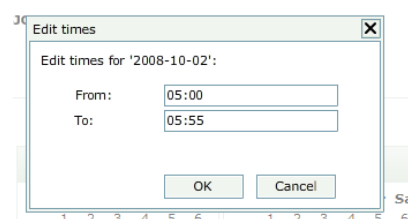
## Example

The picture below shows the calendar for local time channels.




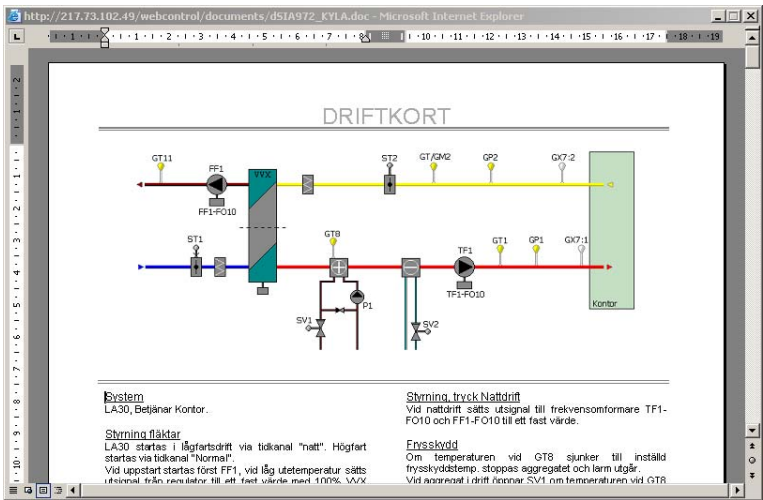
## Part of a day

EXO4 Web Server 2010 edition 2 and later has support for holidays that only cover a part of a day. On the calendar tab, this type of holidays is displayed in orange. The times can be inspected and changed in the dialog *Edit times*, which is opened by pressing the Shift key and clicking on a day on the calendar tab.



# Chapter 10 Document

**Function texts** Documents about the system, e.g. function texts or other types of documents that are stored on EXO4 Web Server, is opened with the button  in the main window.



**Document types** The document types that can be handled are limited by the client's web browser's possibility to show documents via so-called plug-ins. Documents of common formats, like e.g. .DOC and .PDF can in most cases be handled.

# Chapter 11 User Administration

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- Register users** A user with the access level System Installer or Administration Group has permission to add, remove and edit existing users in EXO4 Web Server.
- Access levels** The access levels in EXO4 Web Server are described in the section *Access Levels* later in this chapter.

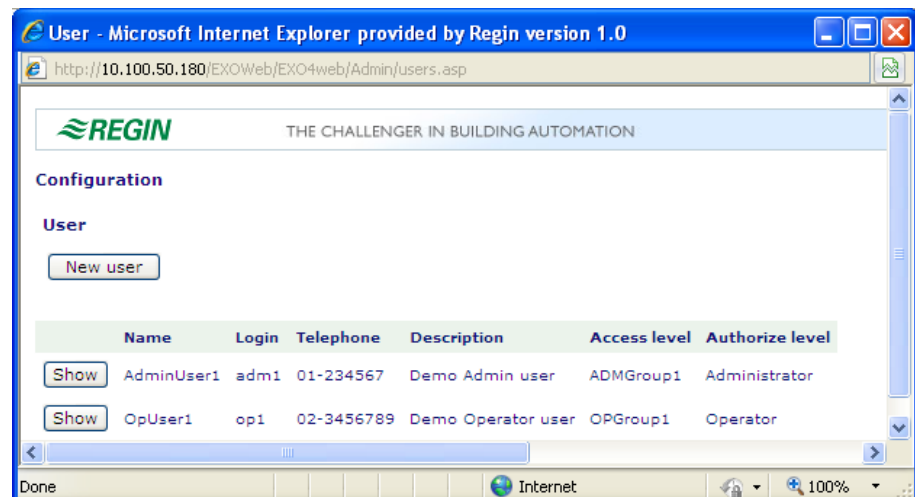
## User Configuration

- Administration group** An administration group user can add, remove, and update users who are registered in the same administration group.

### Open



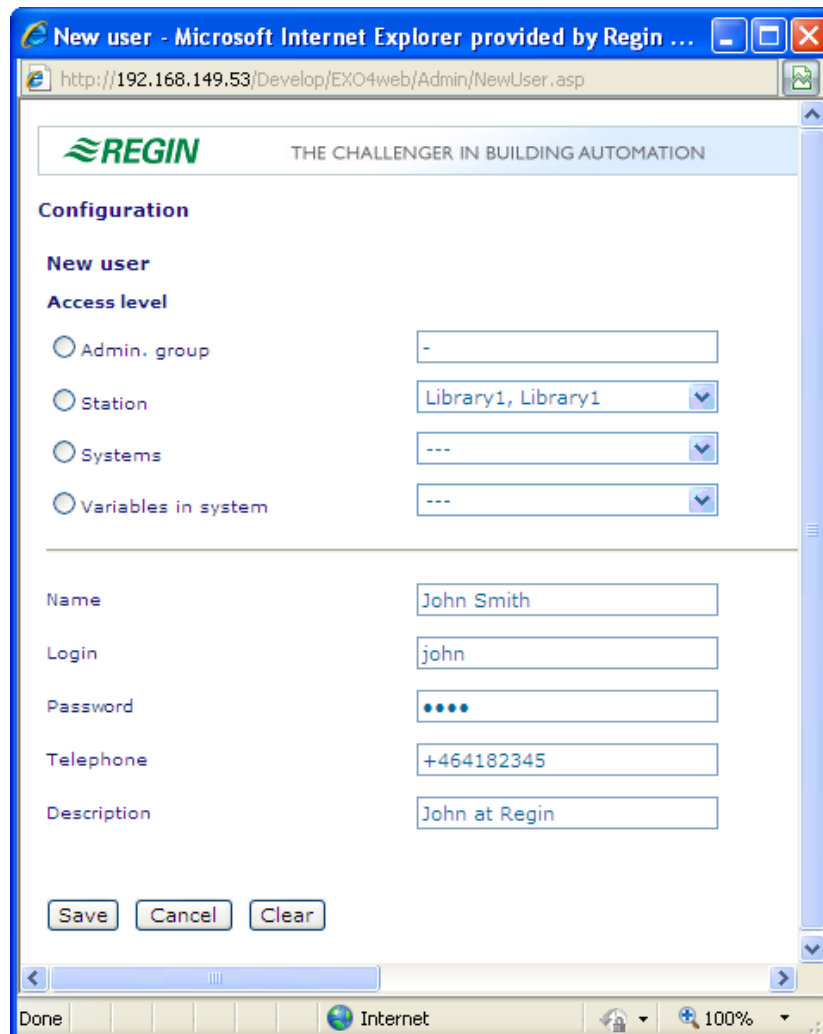
The button is a link to the User Configuration page, which is an overview page with information about the users in the administration group user's stations.



## Register a new user

### New user

Click on the button **New user**. The page for adding users opens.



The screenshot shows a web browser window titled "New user - Microsoft Internet Explorer provided by Regin ...". The address bar shows the URL "http://192.168.149.53/Develop/EXO4web/Admin/NewUser.asp". The page header features the "REGIN" logo and the tagline "THE CHALLENGER IN BUILDING AUTOMATION". The main content area is titled "Configuration" and "New user". Under "Access level", there are four radio buttons: "Admin. group", "Station", "Systems", and "Variables in system". Each radio button is followed by a text field or a dropdown menu. The "Station" radio button is selected, and its dropdown menu shows "Library1, Library1". Below the "Access level" section, there are five text input fields: "Name" (containing "John Smith"), "Login" (containing "john"), "Password" (containing four dots), "Telephone" (containing "+464182345"), and "Description" (containing "John at Regin"). At the bottom of the form, there are three buttons: "Save", "Cancel", and "Clear". The browser's status bar at the bottom shows "Done", "Internet", and a zoom level of "100%".

### Access level

Select the access level for the user. The access level for a user controls the access to stations and systems. See the section *Access Levels* below.

The access levels Station, Systems and Variables in system must be defined by a user with the access level System installer to be selectable.

### Login and password

Enter a Login ID and a Password. Name, Telephone and Description are optional.

### Buttons

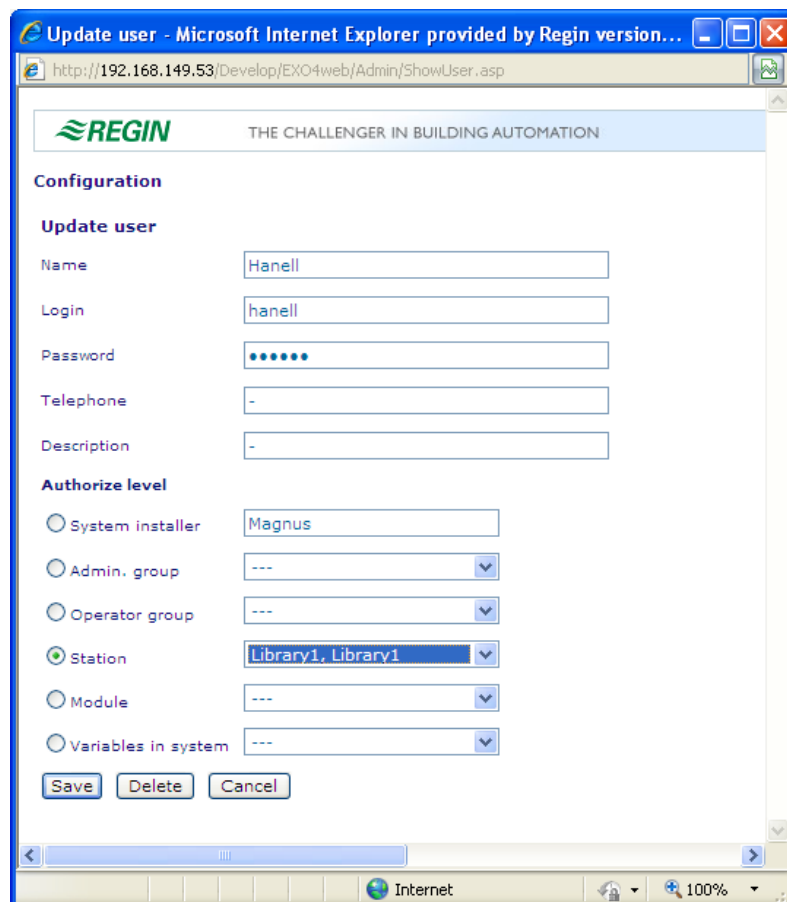
Click on the button **Save** to register the user, or **Cancel** to return to the main menu. **Clear** deletes all entered texts and selections.



## Editing and deleting users

### Show

To edit or remove a user, click on the button **Show** in front of the name.



### Edit

To edit the information about the user, enter the changes and click on **Save**. In EXO4 Web Server 2010 edition 2, it is also possible to change the log-in name of a user.

### Delete

To remove the user's access to EXO4 Web Server. Click first on the button **Delete** and then **Save**.

## Access Levels

### System Installer

#### Highest

*System Installer* is the highest access level in EXO4 Web Server and has full administration permissions.

#### EXO system

Only a System Installer can add, remove, or change information about the EXO system.

#### Access permissions

Only a System Installer can hand out access permissions to the EXO system for different user categories. For each variable, the System Installer states which access permissions users of the different categories will have.

#### All users

Only a System Installer can add, remove, or change the information about all users. (Limited permissions are available for the access level Administration group.)

## Administration Group and Operator Group

- More than one station** The access levels *Administration group* and *Operator group* are primarily intended for one or more users that should have access to more than one station, for example a company that owns a plant with several stations, or a caretaker monitoring the operation in buildings in an area with several stations.
- Administration group** A user on the Administration group access level has the permission to add, remove, and update users in the part of the EXO system that the administrator has access to. Which permissions (reading, reading and writing, or no access at all) the different access levels should have for a certain variable is always determined by a System Installer.

## Station

- One station** A user on the *Station* access level has access to the variables in a certain station, which a System Installer has decided.
- Station users** Users with Station permissions can be added, removed, and changed by a System Installer and by an Administration group user registered for the station.

## System (Module)

- One system** A user on the System access level has access to the variables in a certain system (controller), which a System Installer has decided.
- System users** Users with System permissions can be added, removed, and changed by a System Installer and by an Administration group user registered for the system.

## Variable

- Some variables** A user on the *Variable* access level has access to the variables in a certain system, which a System Installer has decided. This access level can be used when you, for example, wish to give certain users permission to some of the variables registered for a system, and give other users permission to other variables in the same system. The access level can also be used when you want different categories of users to see different process images.
- Variable users** Users with Variable permissions can be added, removed, and changed by a System Installer and by an Administration group user registered for the system.



## AB Regin

### Head office

Box 116, S-428 22 Källered,  
Sweden

Phone: +46 31 720 02 00  
Fax: +46 31 720 02 50

info@regin.se  
www.regin.se

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### France

Regin Controls SARL

32 rue Delizy  
F-93500 Pantin

Phone: +33 1 41 71 00 34  
info@regin.fr  
www.regin.fr

### Germany

RICCIUS + SOHN GmbH

Haynauer Str. 49  
D-12249 Berlin

Phone: +49 30 77 99 40  
info@riccius-sohn.eu  
www.riccius-sohn.eu

### Spain

Regin Ibérica, S.A.

C/Arganda 18 local  
E-28005 Madrid

Phone: +34 91 473 27 65  
info@regin.es  
www.reginiberica.com

### Singapore

Regin Controls  
Asia Pacific Pte Ltd

66 Tannery Lane  
# 03-04 Sindo Building  
Singapore 347805

Phone: +65 6747 8233  
info@regin.com.sg  
www.regin.com.sg

### Hong Kong

Regin Controls  
Hong Kong Ltd

Room 2901  
EW International Tower  
120 Texaco Road  
Tsuen Wan, NT  
Hong Kong

Phone: +852 2407 0281  
info@regin.com.hk  
www.regin.com.hk