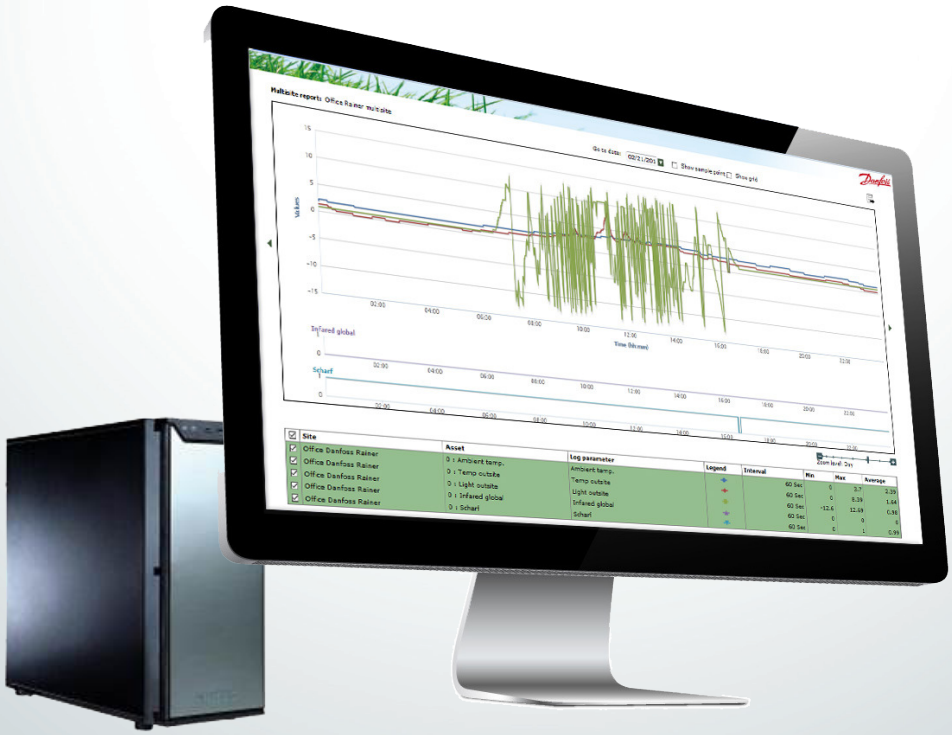
ENGINEERING
TOMORROW

User Guide

Enterprise Manager
AK-EM 800

ADAP-KOOL® Refrigeration Control System



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Document history

Document	Notes
USCO.PI.R1.G1.02	First document release
USCO.PI.R1.G2.02	Minor updates
USCO.PI.R1.G3.02	Updates. v. 1.21
USCO.PI.R1.G4.02	Updates. v. 1.31
USCO.PI.R1.G5.02	Updates. v. 2.01
USCO.PI.R1.G6.02	Updates. v. 2.11
USCO.PI.R1.G7.02	Updates. v. 2.21
USCO.PI.R1.G8.02	Updates. v. 2.23
USCO.PI.R1.G9.02	Updates. v. 2.24

Introduction

The AK-EM 800 is an Enterprise Management solution from Danfoss for the food retail industry. The AK-EM 800 is a multi-user, multi-site server PC application which provides alarm management and automatic data collection, together with reporting features.
This document is designed to guide you through the installation of your AK-EM 800. This guide will also cover the installation of the included AKM agent, which is required to support legacy Danfoss control devices (described later in this guide).

Target PC and software specifications

The minimum computer specification is detailed below. AK-EM 800 can run on a real and also on a virtual server. Database and application can be installed on different machines, but both machines must be in the same local area.

Product	Configuration	Load factor	Details
AK-EM 800 Server (same for AKM-Agent)	Hardware	<50 networks	• Processor - i3 OR i5 • RAM – 6 GB or above • Storage – 300GB or above
		>50 networks	• Processor – i5 OR i7 OR above • RAM – 12 GB or above • Storage – 1 TB or above
	Software	<50 networks	• Windows 7 64 bit / Windows Server OS 64 bit *(AK-EM 800 only)* • Tomcat memory – 4 GB
		>50 networks	• Windows 7 Enterprise 64 bit / Windows Server 2008 R2 or Above (64 bit) *(AK-EM 800 only)* • Tomcat memory – 4 GB or above
Client Computer Configuration	Browser	• Mozilla Firefox 39.0 or higher • IE 11	
	Screen resolution	• 1024*768	
	RAM	• 2 GB or above	

Front End	Versions Supported
AK-SC 255	2.211 or higher
AK-SC 355	3.091 or higher
AK-SM 800	8.011 or higher
AKM	7.41

System Layout

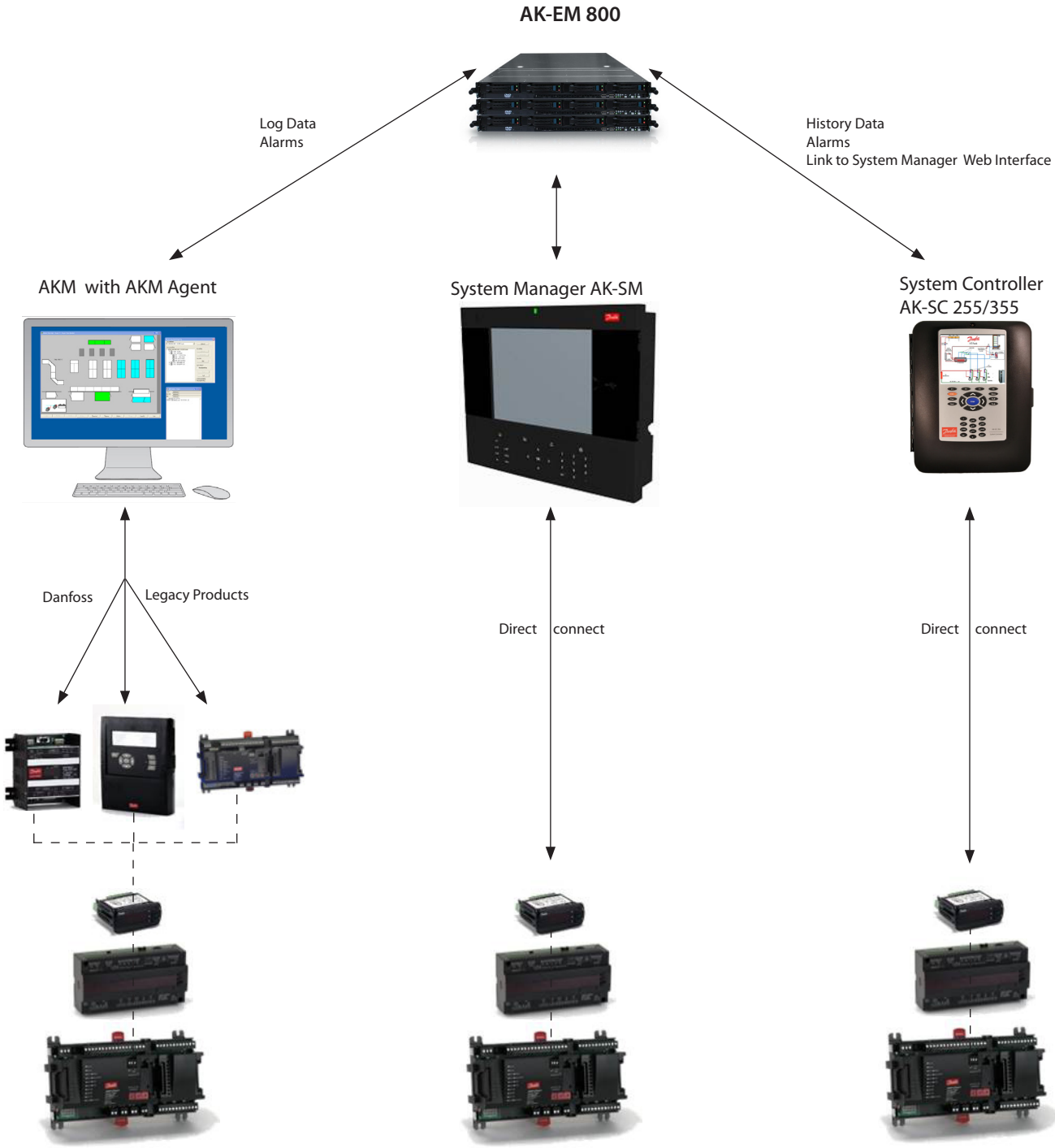
Direct connection (AKM agent not required)
The AK-EM 800 provides a direct communications connection path to AK-System Manager 800 series of front end controllers. AKM agent installation not required when using the AK-SM 800 series.
In addition, the Danfoss AK-SC 255/AK-SC 355 (see minimum software specs in table opposite) are also supported via direct connect path.
Legacy support (AKM agent required)
For applications that use AK-SM 720, AK-SM 350, AKA Gateways, and the Danfoss m2 (known as legacy systems), it is still possible to connect to the AK-EM 800, via the use of the AKM-Agent. The use of the AKM agent allows for alarms and history logs from these systems to be synchronized between the existing AKM PC installation and the AK-EM 800.

Under this application the AK-EM 800 is connected and communicates to an installed AKM agent, which must be installed on designated AKM PC. There can be more than one AKM PC installation that communicates to the AK-EM 800. Each AKM PC will require installation of the AKM agent.

Direct connection AK-SC 255 /AK-SC 355 / AK-SM 8xx

Front End	**Versions Supported**
AK-SC 255	2.211 or higher
AK-SC 355	3.091 or higher
AK-SM 800	8.011 or higher
AKM	7.41

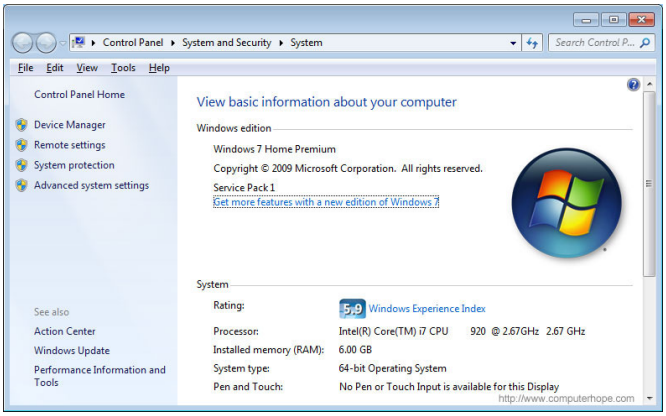
The following picture describes the System Layout.



Installation of AK-EM 800

Up to max. 50 sites the installation can be done on one single PC. Above 50 sites a distributed installation (application and database on 2 different PC's) is strongly recommended.

To explain how to make a distributed installation and also how to make upgrades, please check the document "AK-EM 800 installation guide"



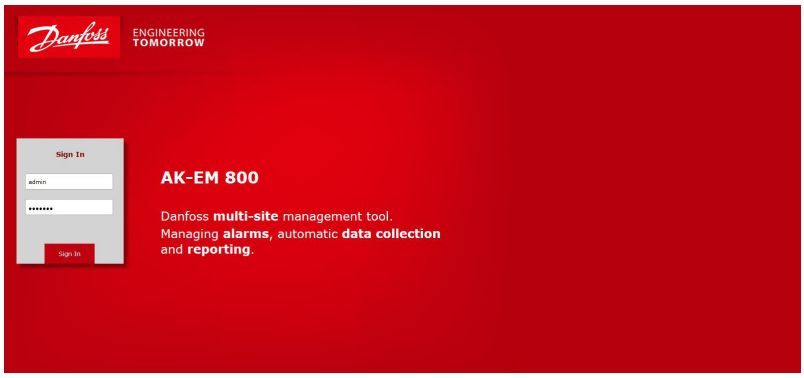
Login to AK-EM 800

The AK-EM 800 installation creates a Desktop icon. Use the icon or type in your browser

http://ipadress:8080/AKEM_800

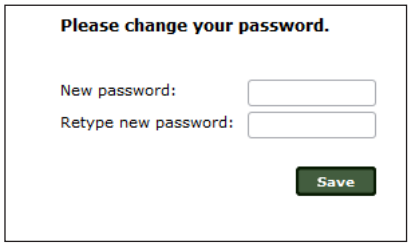
Ipadress is from the actual AK-EM 800 system

Default Log on name: **admin**
Default Password: **danfoss**

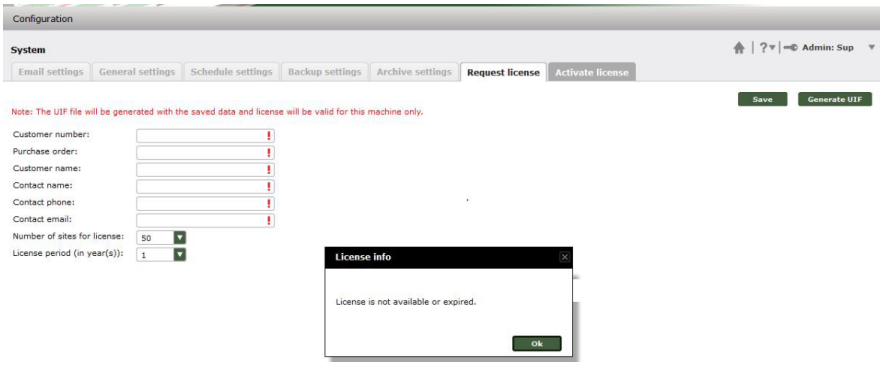


At the first login the user will then be prompted to change the password.

New password must be 7 to 15 characters. (numbers and letters)
Spaces are allowed.

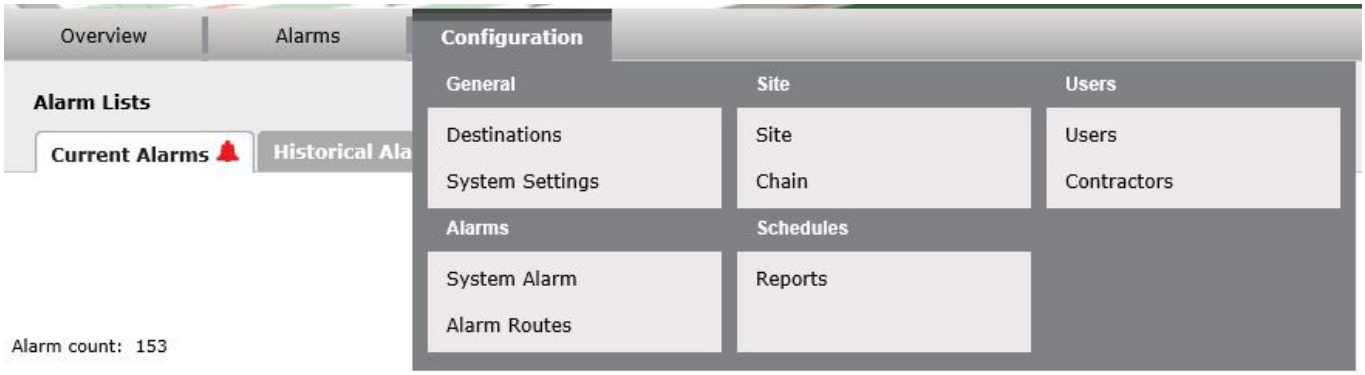


If AK-EM 800 is not licensed, a license is required (see chapter require license) and AK-EM 800 will start in following window.
It is not possible to use AK-EM 800, before the license is activated.

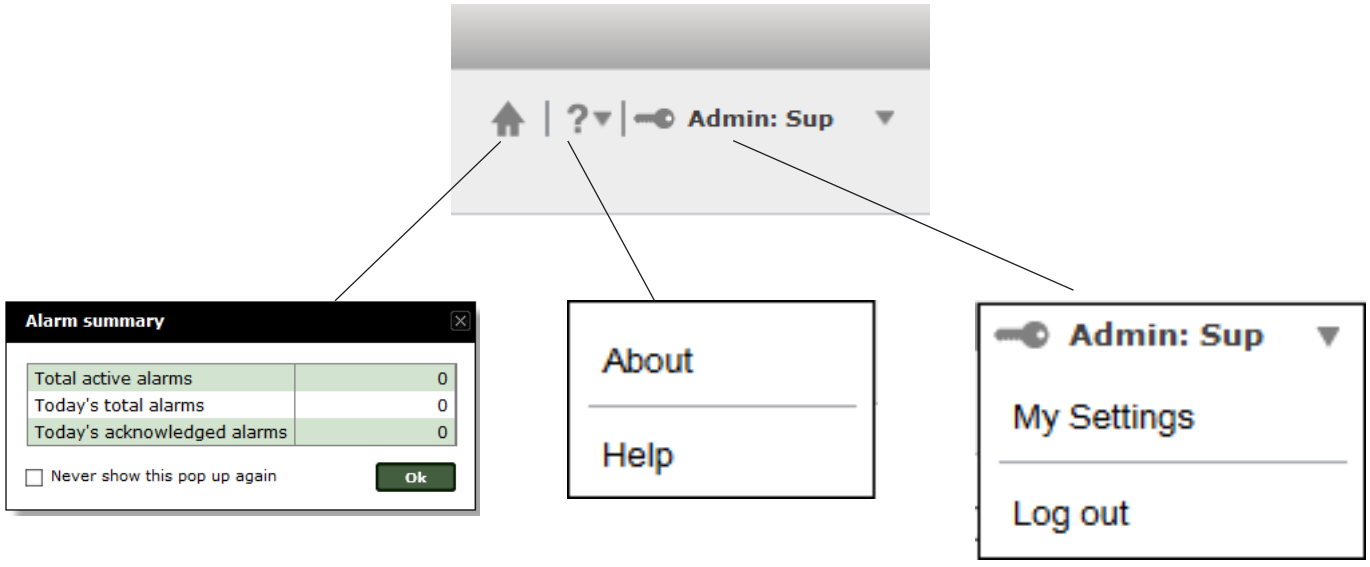


Layout

AK-EM 800 is using Mega drop-down selection.
Main fields are Overview, Alarms and Configuration.
Mouse over will present the Sub menus.



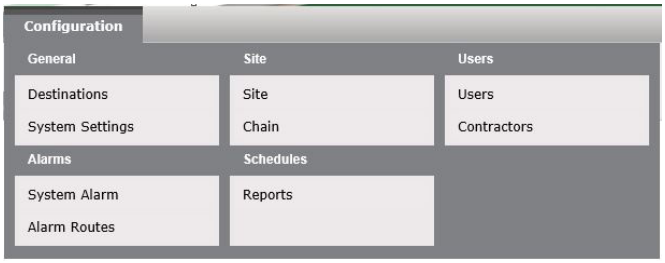
On the top right corner there are three quick links buttons.

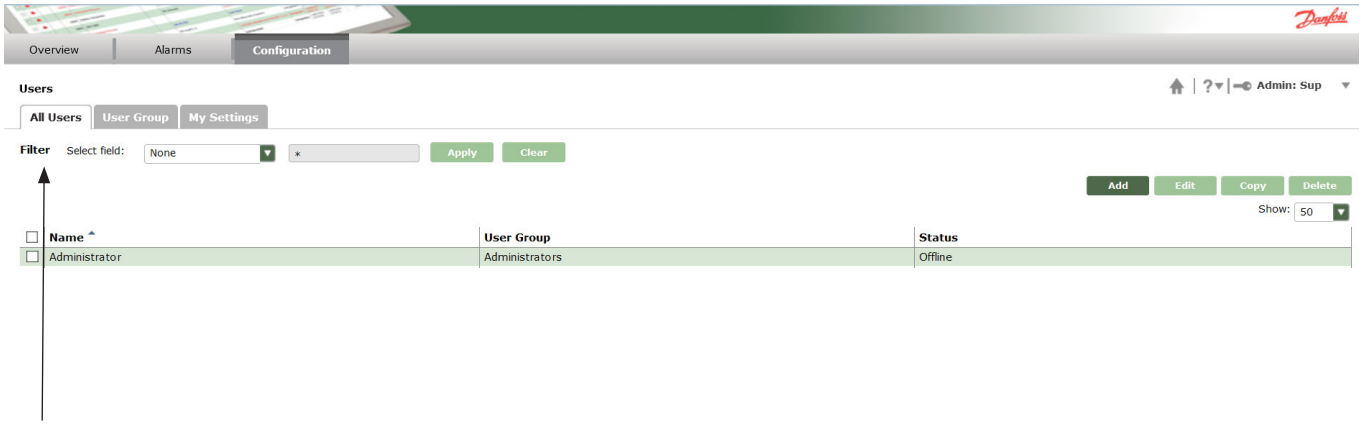


Function layout & filter

Each function is separated into 1 or more pages.

Select Configuration -> Users -> Users



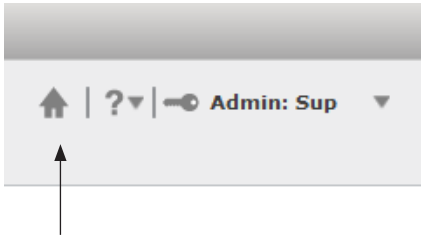


A filter might is available if relevant

Quick Links

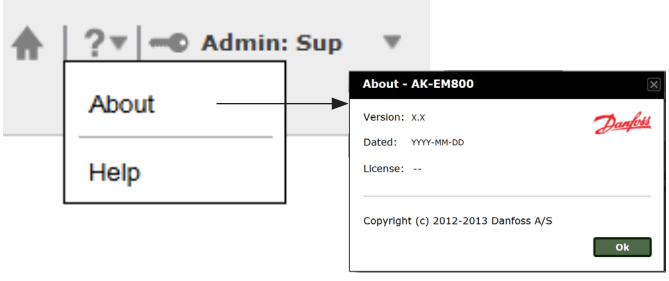
There are three quick links in the top right corner of the screen.

If the Home button is pressed – it would lead to the function defined as the home page for that user.

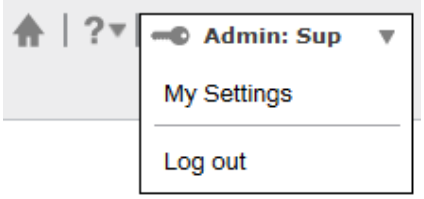


If the Help button is pressed – it would open a new menu with two options.

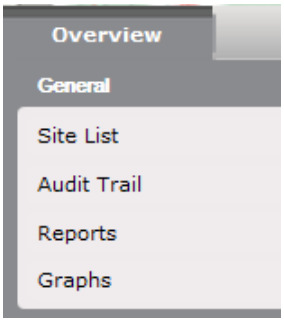
If the Help option is chosen the User Guide for the AK-EM 800 will be opened in a separate browser tab



If the "My Settings" option is chosen it will lead you to the User settings page for the user who is logged on.



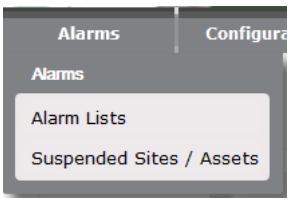
Overview



The Overview menu is where you work with History data.

Site List	– A list of all created sites and possibility to collect logs
Audit Trail	– A list of significant events in the EM 800 system
Reports	– For viewing collected logs and making reports
Graphs	- Create graphs and save them as a report

Alarms

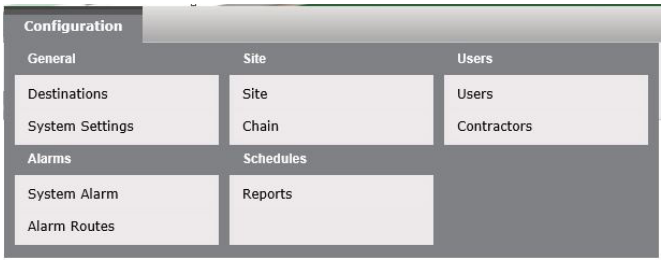


The Alarms menu is where you can manage received alarms.

Alarm Lists	– For managing received alarms
Suspended Sites / Assets	– For suspending alarms from a site or assets

Configuration

The Configuration menu is where you setup the AK-EM 800



General

Destinations – For adding E-mail and Text message receivers

System Settings – For Email server settings, General settings, Folder setting for scheduled report saving, Backup settings, Archive settings, requesting and activation of the license

Alarm

System Alarm – For changing priority settings for system alarms

Alarm Routes – For making changes in the alarm forwarding rules

Site

Site – For adding / changing sites

Chain – For adding / changing chain details

Users

Users – For adding / changing user details

Contractors – For adding / changing contractors details

Schedules

Reports – To setup send reports on recurrent basis

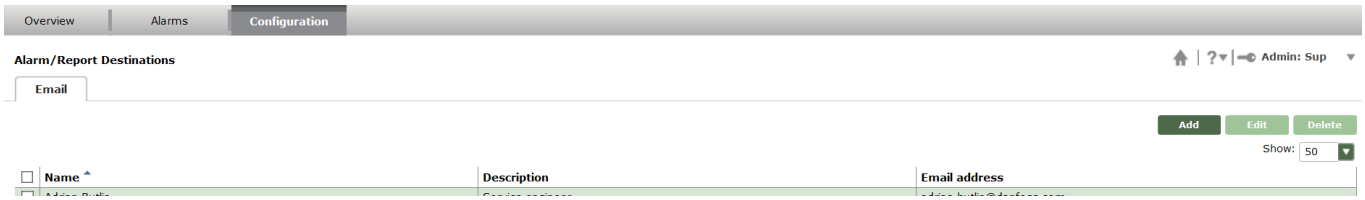
Destinations

This is where the destinations are added. These destinations can be used for various functions like Report forwarding, Alarm forwarding etc.

Forwarding is supporting only Email

Select Configuration -> Destinations -> Email

Press "Manage"



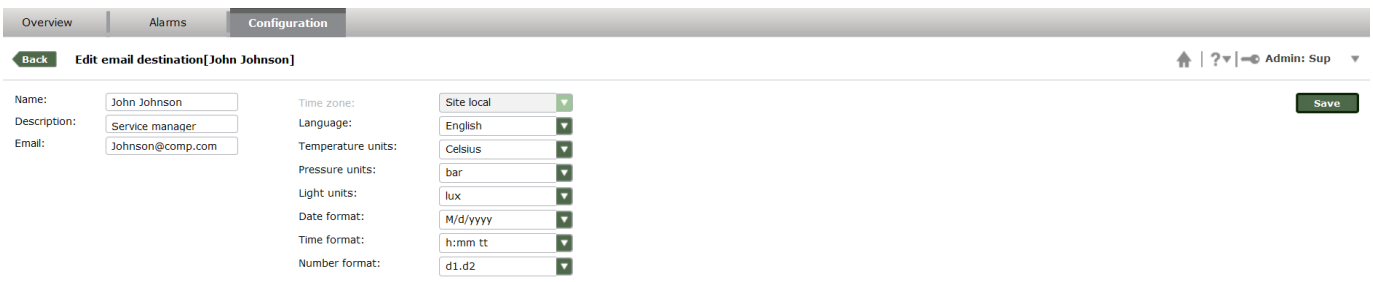
For adding a new entry select the "Add" button

Adding a Destination

1. All the fields in this column are required fields and must be filled out. Today it's not possible to change Time zone. That's for future releases only.

2. The selections in this field can be made according to preferences

3. When all required settings have been made the entry must be saved

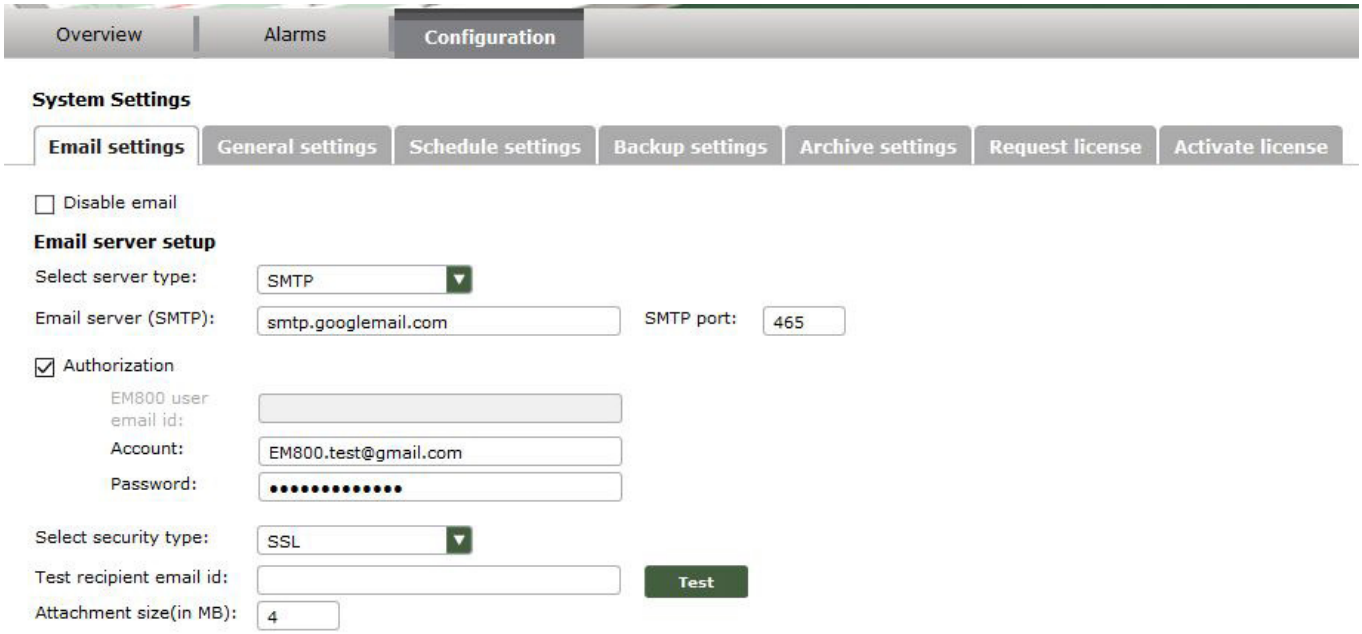


System Settings

This is where settings related to the AK-EM 800 must be entered.

In system settings the user can add/change settings for Email, general details, schedules, backup, archive and licensing.

Select Configuration -> System Settings



1. Select which type of server is used

2. Add server details (e.g. Gmail, GMX,..)

3. If the server only allows authorized users this tick mark must be selected and details added

4. To test the entered details a Test mail can be sent to verify if entered settings are correct

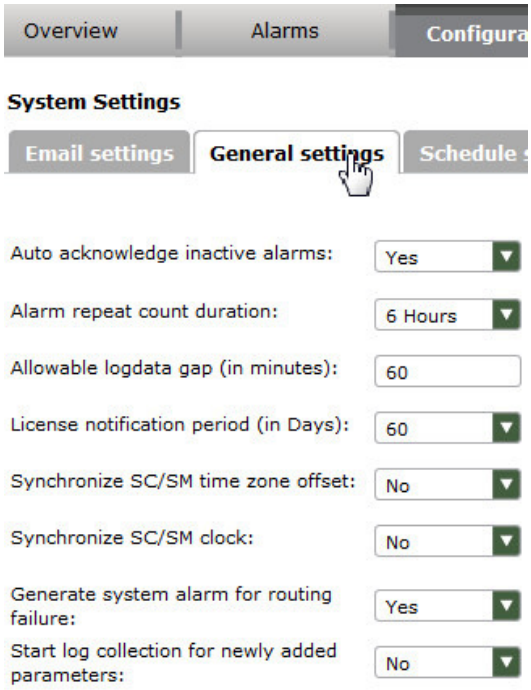
It is possible to use the following type of Email servers:

1. No security type
2. SSL Encrypted SMTP Server
3. TLS Encrypted SMTP Server
4. Unauthorized SMTP Server
5. Microsoft Exchange 2010 Server.
   a. If the Exchange server is chosen the fields above will be different but intuitive.
   b. Exchange server only supports https not http

General Settings

This is where settings related to alarms are entered.

Select Configuration -> System Settings -> General Settings



Auto acknowledge inactive alarms:
If an alarm should be acknowledged automatically when it is inactive. The alarm will acknowledge the alarm in the front end as well (except AKM sites).

Alarm repeat count duration
When this setting is enabled with a time value, the AK-EM 800 system will monitor every alarm and add a counter detail, which shows how many times this alarm has occurred within the time set here since the last alarm has been received.
Example:
If the value here is set to 1 hour and an alarm is received at 7:00 Then AK-EM 800 will see how many times that alarm has been received from 6:00 to 7:00. (see picture Alarm repeat count).
Even if the time now is 9:00 it will still calculate from 6:00 to 7:00, because the last time it received this alarm was at 7:00.

Allowable logdata gap (in minutes)
Will ignore data gaps in logs > XX minutes. Max. time is 1440 minutes.

Dependent on the front end and the usage of the controller data gaps are possible. If this is the case and the user is not interested to get a system alarm for any data gap, this value should be adjusted.

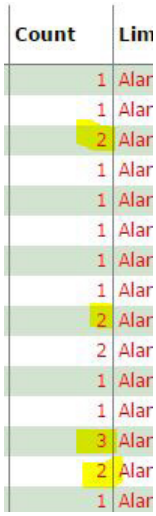
License notification period (in days)
When the license will expire, the user will get on every logon a notification (min 14 days, max 60 days before expiring)

Synchronize SC/SM time zone offset
AK-EM 800 is able to synchronize the time zone offset of AK- SC 255/AK-SC 355 and the SM800 series based on server time
Synchronize SC/SM clock
AK-EM 800 is able to synchronize the clock of AK-SC 255/AK-SC 355 and the AK-SM 800 series based on server time.

Generate system alarm for routing failure:
Enables/disables AK-EM 800 to create system alarms in case of alarm routing issues

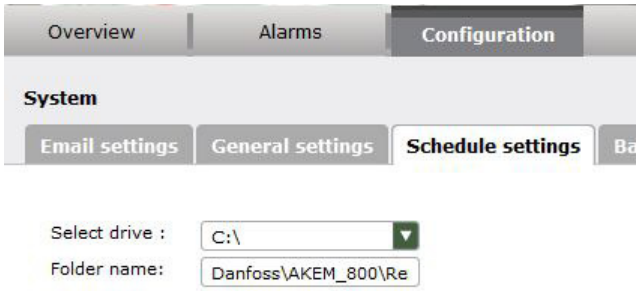
Start log collection for newly added parameters
In case new logs were added in the front end and the user wants to collect them automatically set this parameter to YES. The user will still be informed with the system alarm "conflict" if logs are changed

"Alarm repeat count"



Schedule Settings (for reports)

Select Configuration -> System Settings -> Schedule Settings

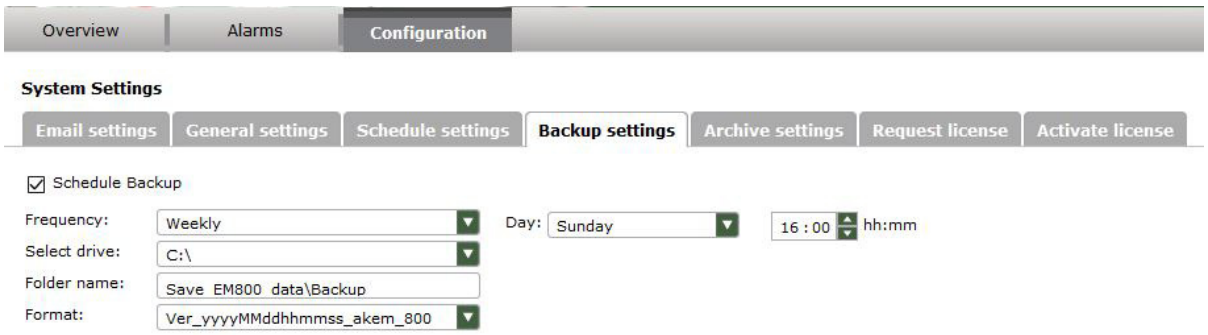


In the schedule report section the user will be able to send a report as an attachment to an Email. But he will also be able to save a report on a scheduled basis in a free selectable folder. This can be a local folder on the AK-EM 800 server, but also a network drive.

Backup Settings

Select Configuration -> System Settings -> Backup Settings

This feature allows the Superadmin to create a manual or scheduled backup of the system.
The Superadmin has all rights at any time, and can not be deleted (default:admin/danfoss). There are several functions reserved for Superadmin only like report schedule settings, backup, archiving and licensing and alarm clear in one go without acknowledge.

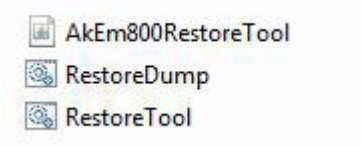


This backup is always a complete database dump and not an incremental one.
The user can create a schedule on a daily, weekly or monthly basis (Attention! AK-EM 800 will NOT delete any old backup file).
To create such a backup, the Superadmin must select time, folder name the format and if the user likes to compress the backup file. If everything is selected, he must save his selection or he can make a backup on demand only (press backup now) In that case he will get a message and his selection is not saved

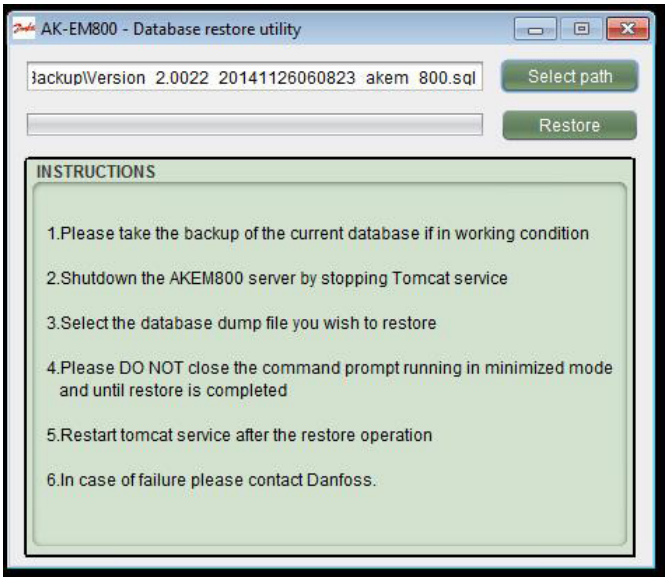
Restore

To restore a backup to AK-EM 800 you can use the SQL order (if known) or a tool, which comes together with AK-EM 800.

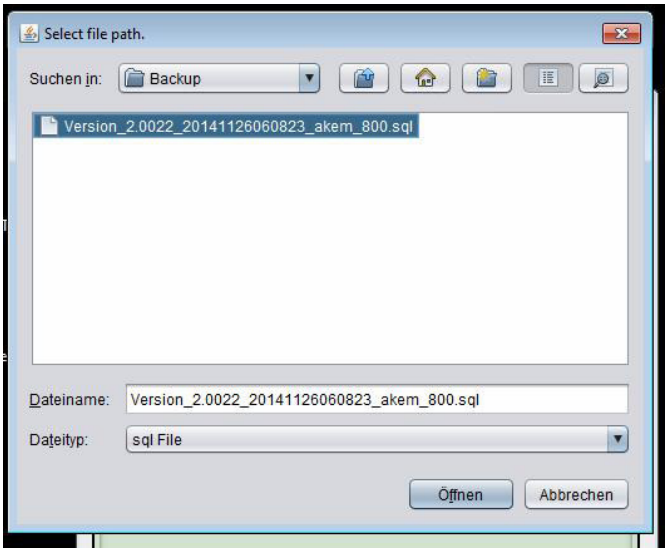
The tool is available in the subfolder named "RestoreTool" in the AK-EM_800 folder.
The folder contains an executable JAR file and two batch files.
Please start the batch "RestoreTool" and follow the instructions.



It's important to stop the Tomcat service (see installation guide)

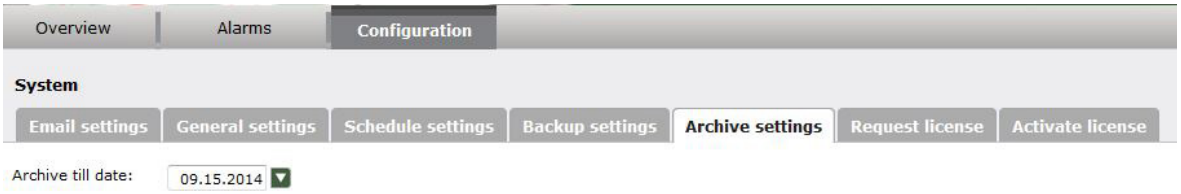


Select the backup file (press select path) and afterwards press the Restore button. Dependent on size of the file it will take several minutes.
If finished, restart the Tomcat service.



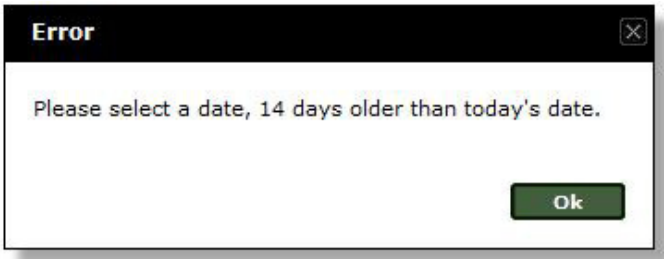
Archive Settings

Select Configuration -> System Settings -> Archive Settings



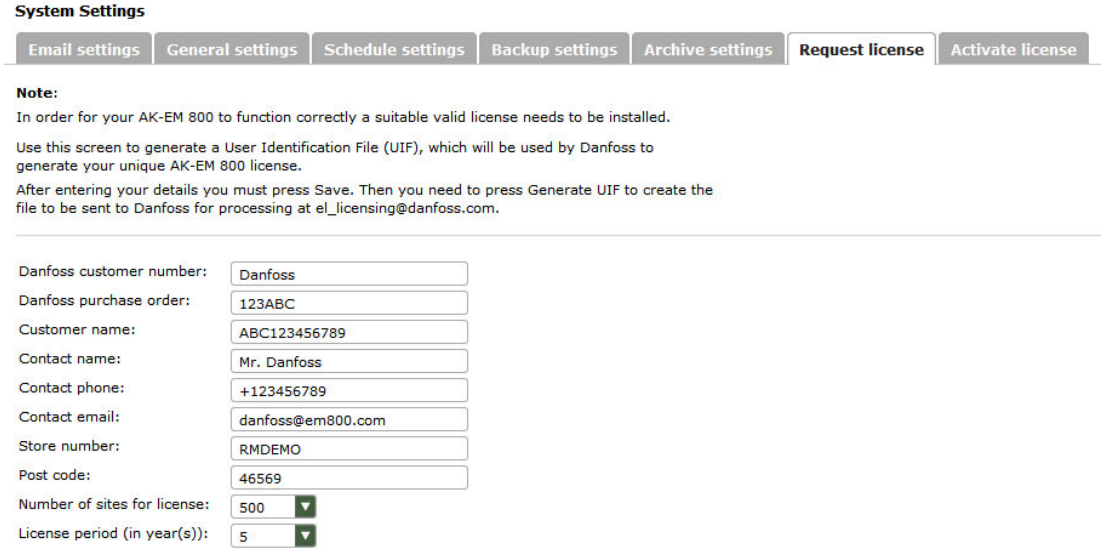
This feature allows the Superadmin to archive (zip) the database. This action will move all data in a different database. They are still visible, but it will take more time to present the data in a report. It is only possible to archive data which are 14day old or older. If the user selects e.g. yesterday, he will get an error message. It is not possible to schedule the archive.

To create an archive, the Superadmin must select a data in the past (min. 14 days old) and press the archive now button.



Request license

Select Configuration -> System Settings -> Request license



AK-EM 800 Version 2.0.1 and higher introduces a new licensing model. A valid license must be purchased from Danfoss in order to operate your AK-EM 800. The license model offers the ability to only pay for functionality or number of sites you require. Please contact your Danfoss sales representative for full descriptions of the different license options.

In order to create a unique license (based on your PC/Server hardware credentials) and paid level of functionality, a custom file is required to be generated within your EM800 and mailed to the Danfoss license office. Once Danofss receives this information, a unique license will be generated by Danfoss and sent back for activation within your AK-EM 800. Upon activation of the license, functionality and site capacity will be unlocked for the duration defined at the time of license creation. The following section describes the overall workflow.

Workflow:

1. Download and install AK-EM 800 software from Danfoss.com (http://food-retail.danfoss.com/knowledge-center/software/ak-em-800/)
2. Fill in all fields (all of them are mandatory)
3. Press the save button(will be confirmed by a popup window "User information saved successfully"
4. Press the "Generate UIF" button. (UIF = user information file). Depended on your browser the user is forced to save the file in a directory of his choice.

The file contains unique information based on the install server or PC hardware and user details previously entered.


```
{"Host Id":"invalid","Contact
name":"User","No. of sites":"500","Purchase
order":"KB00001","Email":"user@danfoss.
com","Customer number":"3150141092","Customer
name":"Danfoss NAM","Primary contact":
"3150141092", "OS_Platform":"2","License
period in years":"5"}
```

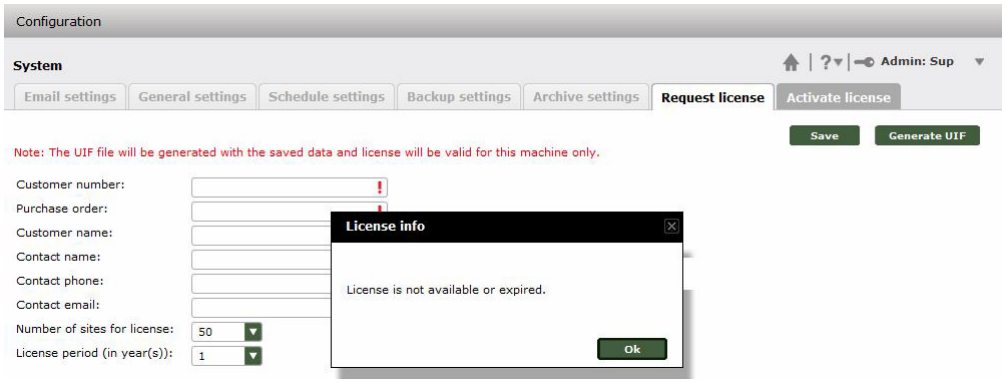

When the UIF file is created, forward it to el_licensing@danfoss.com

Danfoss will process the UIF file and will respond with a license file, which has been generated based on the specific hardware and license purchase previously entered. The license file has the extension .lic (e.g. 3_ disksn=S13TJ90S104587.lic) (e.g. *3_ disksn=S13TJ90S104587.lic*)

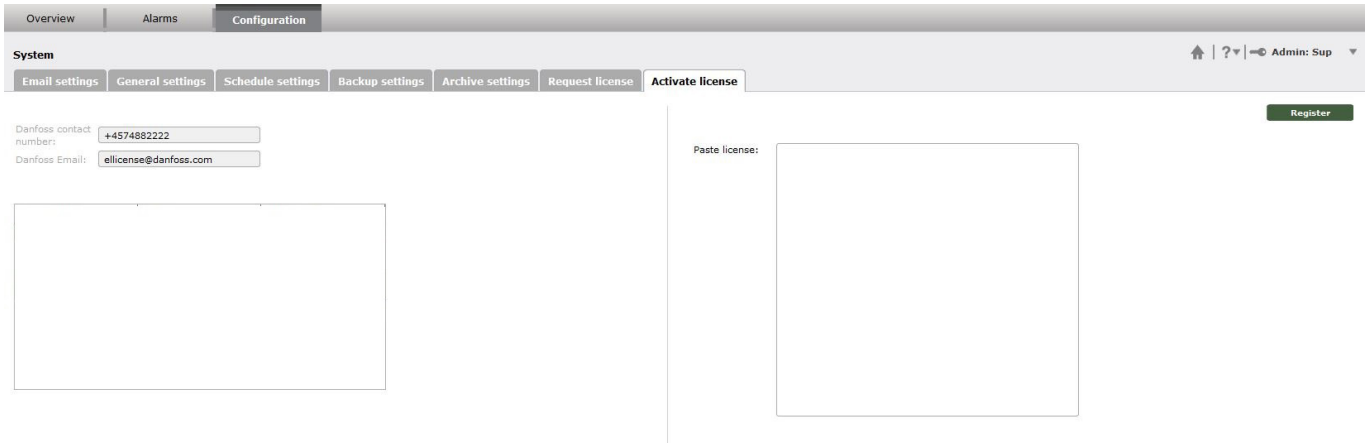
The following section will describe how to deploy the .lic file send by Danfoss.

Activate license

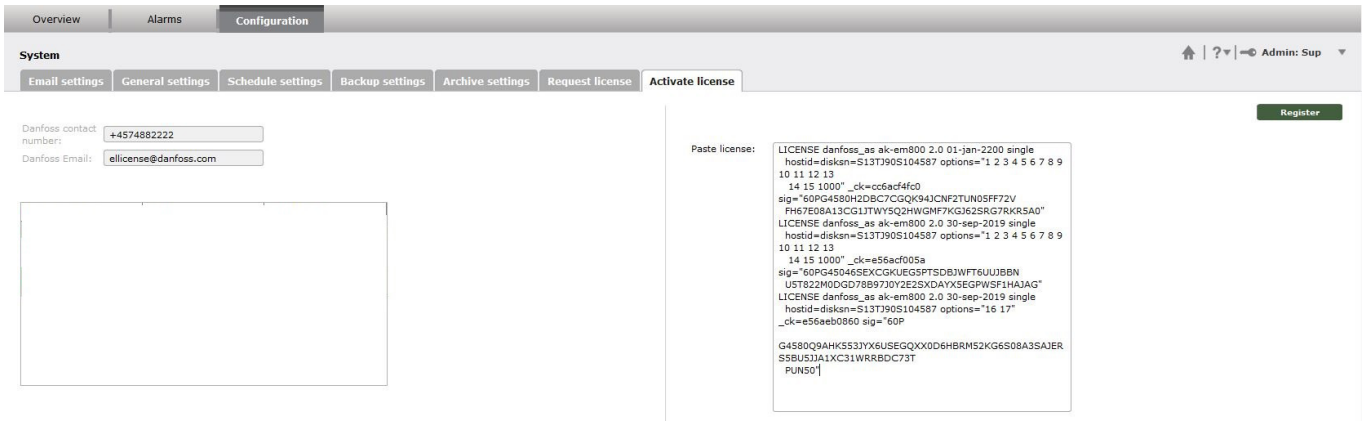
The Superadmin starts AK-EM 800 1st time (default credentials admin/danfoss) or restarts his updated AK-EM 800. If no license is ordered, he can see only following screen. (“License is not available or expired”



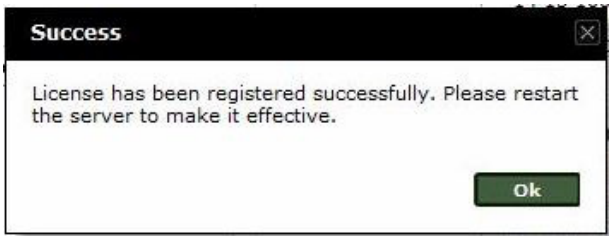
For license entry or updates the user should select Configuration -> System Settings -> Activate license



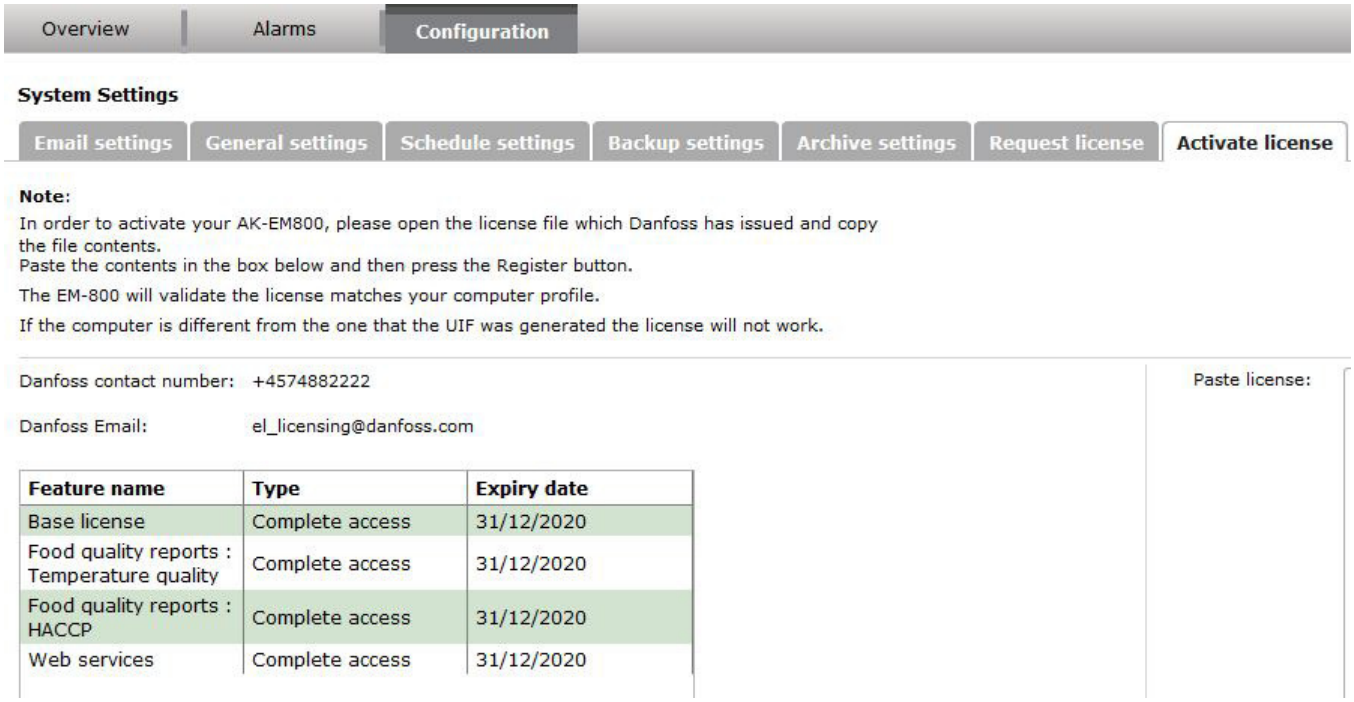
To activate the received license, open the file with a text editor (e.g. Notepad) and copy the complete content in the clipboard (mark all then copy) and paste it in the “Paste license box on AK-EM 800.



Press now the "Register" button and the Superadmin should get following message:



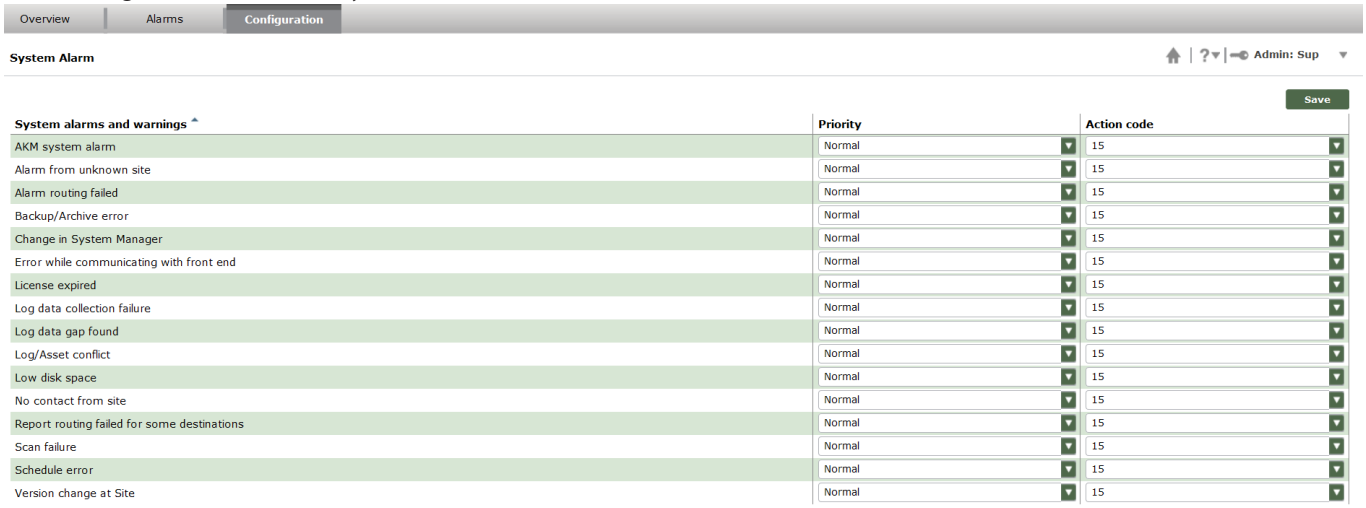
Now the Superadmin can see the license details and the Expire date.



System Alarm Settings

In addition to alarms from the Danfoss front end controllers, the AK-EM 800 can generate System alarms and warning messages that can be sent by the AK-EM 800 System. And on this page it is possible to choose the severity of them.

Select Configuration -> Alarms -> System Alarm



The priority can be chosen from Normal to Critical
And an appropriate Action code can also be chosen from 1-15

The Priority can be used in the current alarm screen as a sorting criteria.
The Action code can be used for alarm forwarding. (see chapter alarm routes)

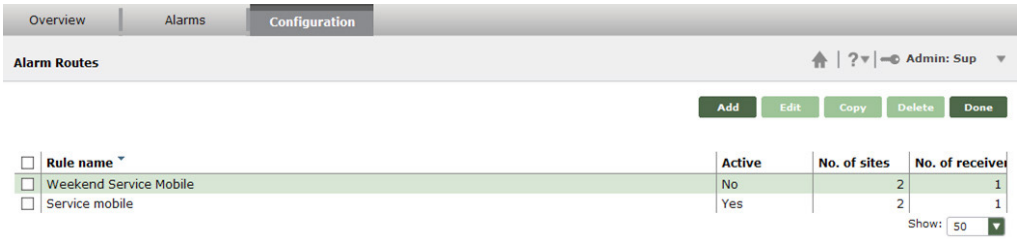
Or the particular alarm type can be disabled.

Alarm Routes

This is where you setup alarm forwarding rules by E-mail to previously created Destinations.

There is a list of all ready created rules which can be used to copy from or completely new rules can be created.

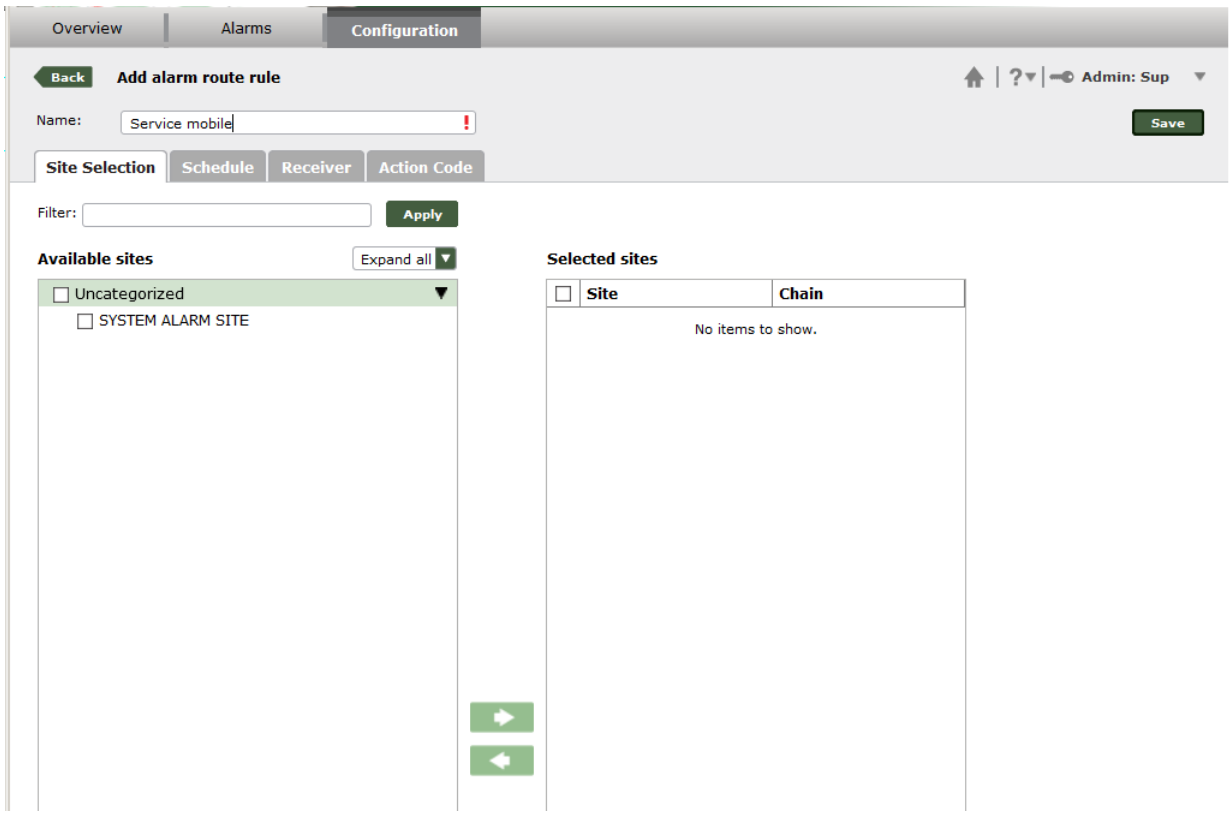
Select Configuration -> Alarms -> Alarm Routes



For adding a Routing rule, click on the "Add" option.

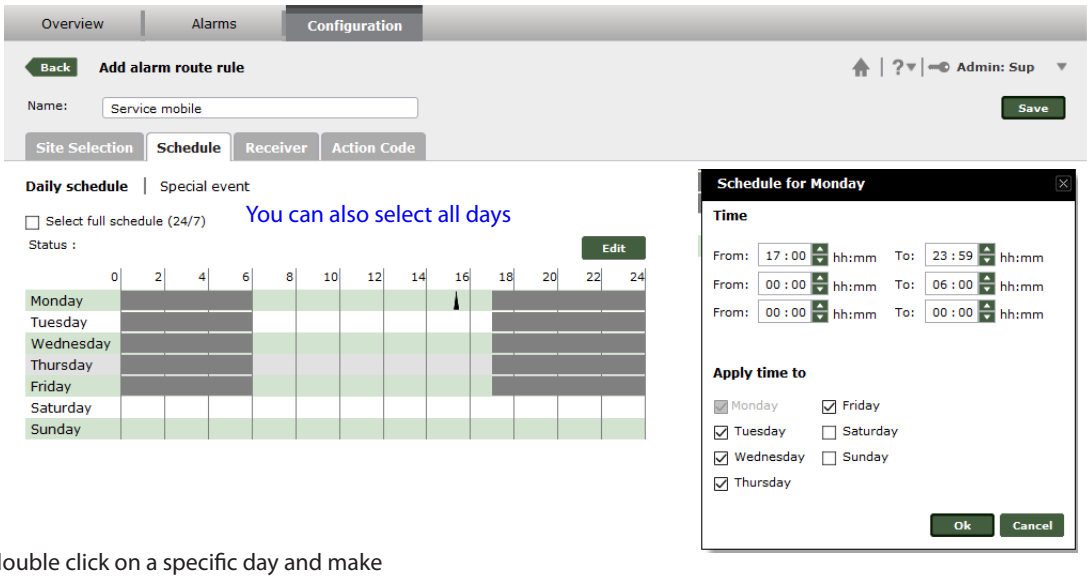
Alarm routes (continued)

First the sites that this rule should be used for must be selected.



1. Define a name for the rule
2. Choose the sites
3. Assign by clicking on the green "Right" arrow.

Then a schedule for when this rule should be affective must be defined



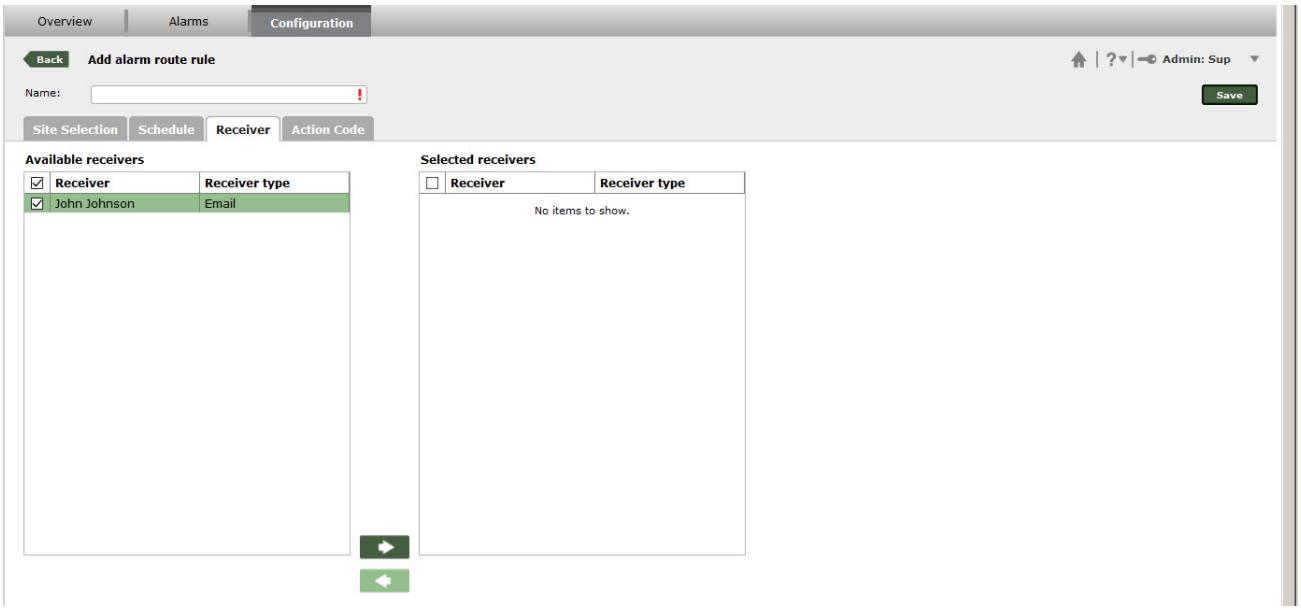
1. Press the edit button or double click on a specific day and make the necessary selection for the schedule. The time values can be from 00:00 to 23:59

2. When done save the values to the time table by pressing OK

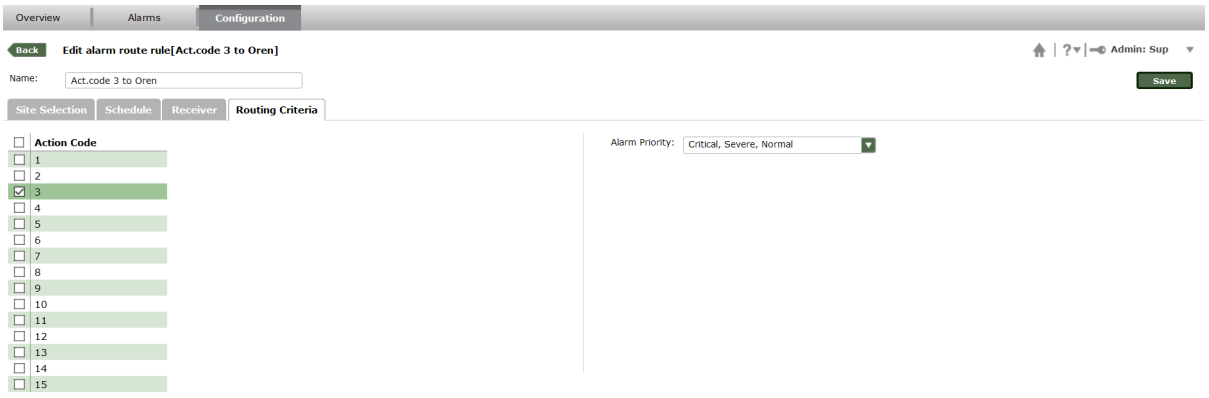
Third step in creating a forwarding rule is to select the recipients of the alarm

1. Choose the correct receiver among available destinations

2. Add it by clicking on the green "Right" arrow.



Select the Action codes and the alarm priority for which this rule should be affective for and save the routing rule.



E-Mail

If all settings are made correctly an e-mail will be sent with the following alarm details.

Panel GW

--- High t.alarm

EKC 204

2013-03-03 16:59:19.0

Log Id	1380
Priority	Normal
Alarm Reason	--- High t.alarm
Action Code	actionCode14
Unit Id	
Trip Value	
Alarm settings	
Active at	03/03/2013
Received at	03/03/2013
Cancelled at	
Duration	
Acknowledged at	
Acknowledged by	
Cleared at	
Cleared by	

Chains

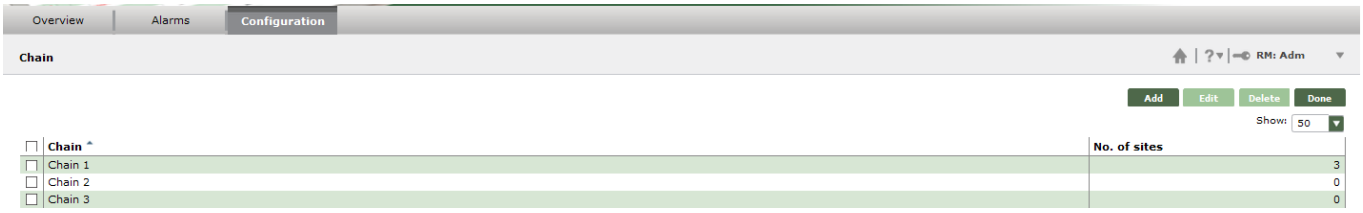
Select Configuration -> Site -> Chain

Supporting multiple customers (Chains) is possible with the AK-EM 800. The following section describes how to configure store chains.

For adding a new Chain, click on the "Add" option.

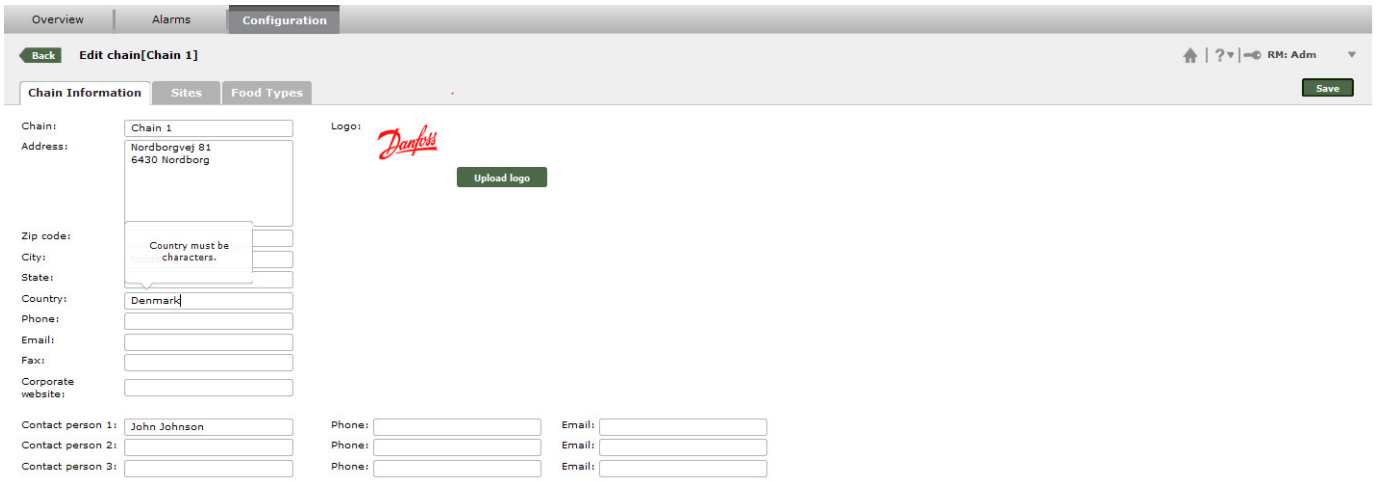
This is where the Chains are managed. Once a Chain has been created they can be associated with sites and reports can be made based on the Chain information

A new chain can be added or existing ones can be modified by clicking the manage button.



Adding a Chain

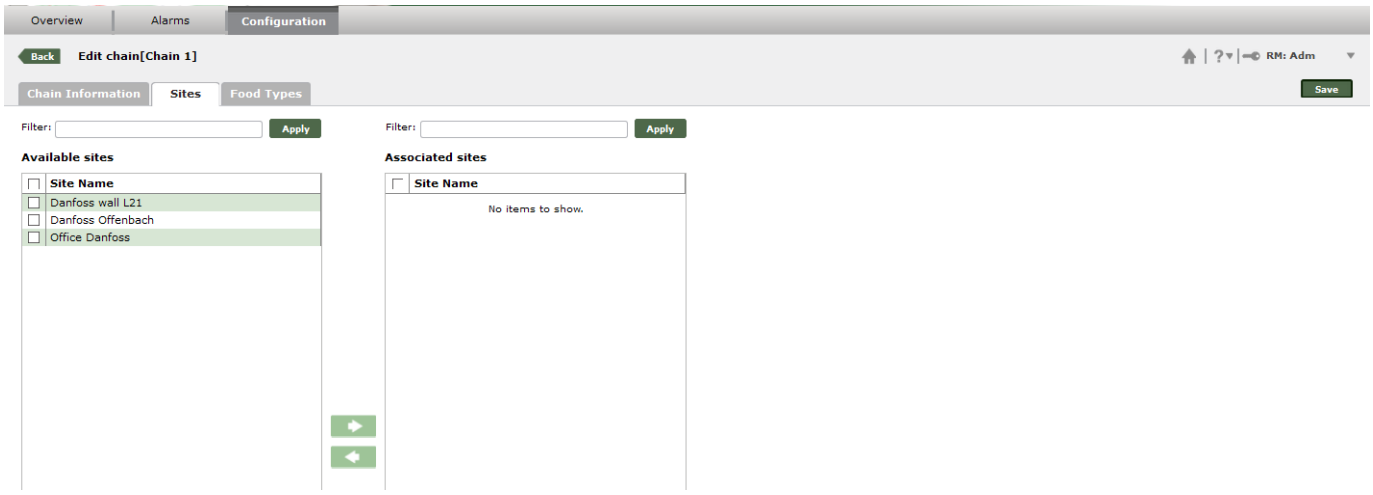
First the contact details must be added



Then the sites must be associated for the chain if they are available and not associated.
The association can also be done later when a site is created.

1. Select which sites to add to this chain

2. Add them by clicking on the green "Right" arrow.

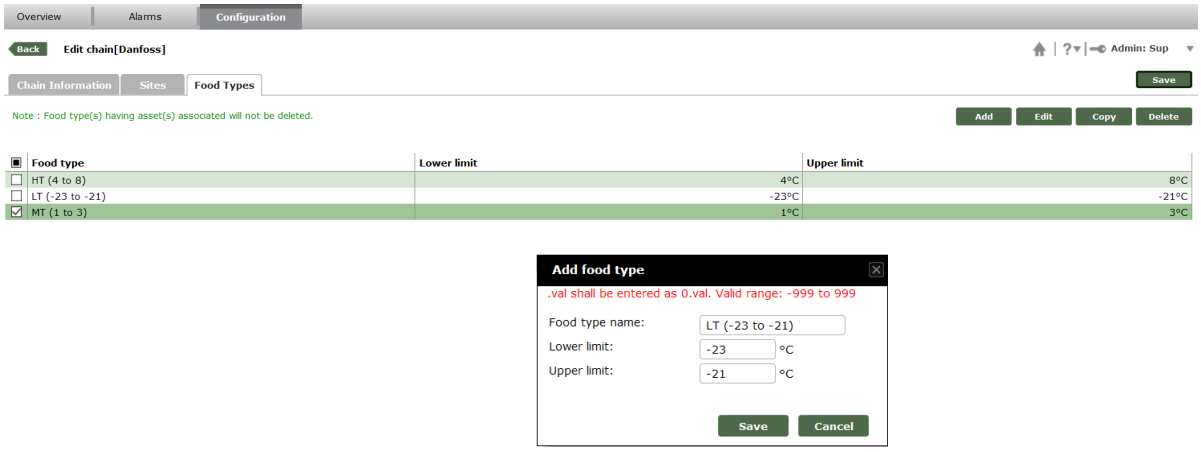


Once the site have been added, the Food types used at this site must be created if HACCP and TQ reports are required.

The Food types are later used when configuring HACCP parameters.

1. For adding a new food type, click on the "Add" option.

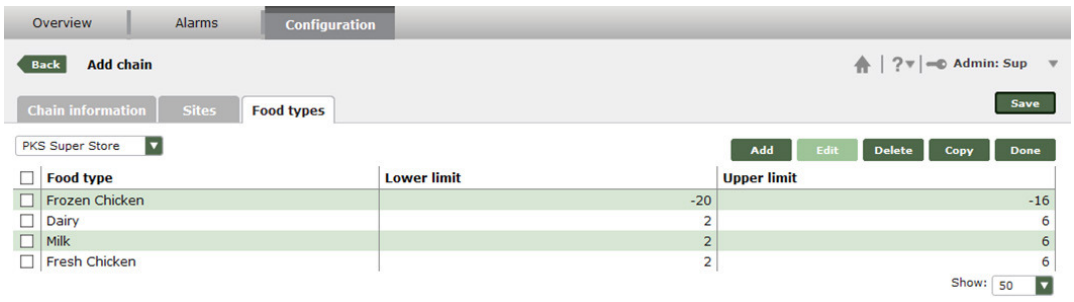
2. Add the necessary details for the entry and save it by pressing "Done". Recommendation: Add the limit also to the Food type name. That makes the limits visible on all settings. (special characters like a / are not allowed for the food type name)



3. When all food types have been added the entries must be saved by pressing "Done".

4. Save the Chain entry by clicking the Save button.

Note: It's not possible to delete a food type, as long it's associated with an asset.

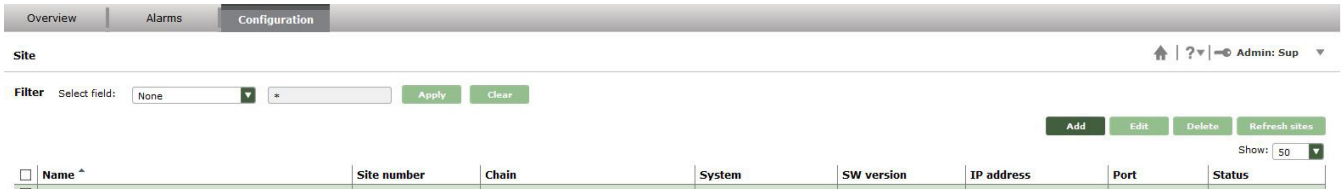


Site

Select Configuration -> Site -> Site

This is where the existing sites are listed, and new ones can be added by clicking the manage button.

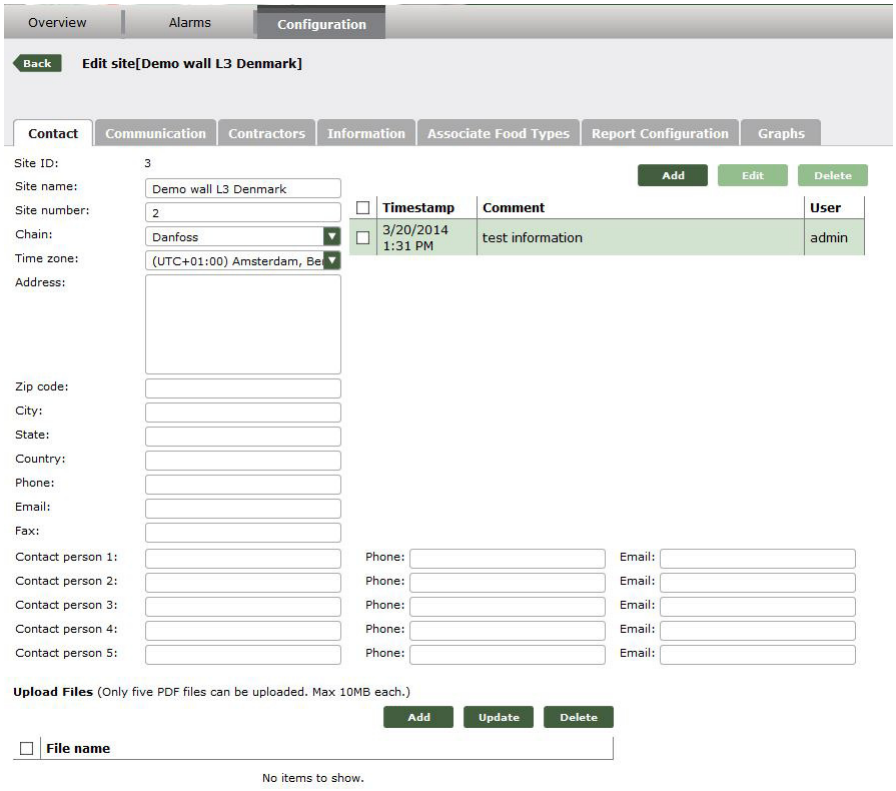
For adding a new Site, click on the "Add" option.



It's also possible to edit, delete or refresh an existing site.
Select only one site to edit.
Select one or more sites to delete or refresh sites. A refresh can be needed, if multiple changes are done on site. E.g. a slave is added to a master unit.

Adding a site

Enter the name and the other details for the new Site entry

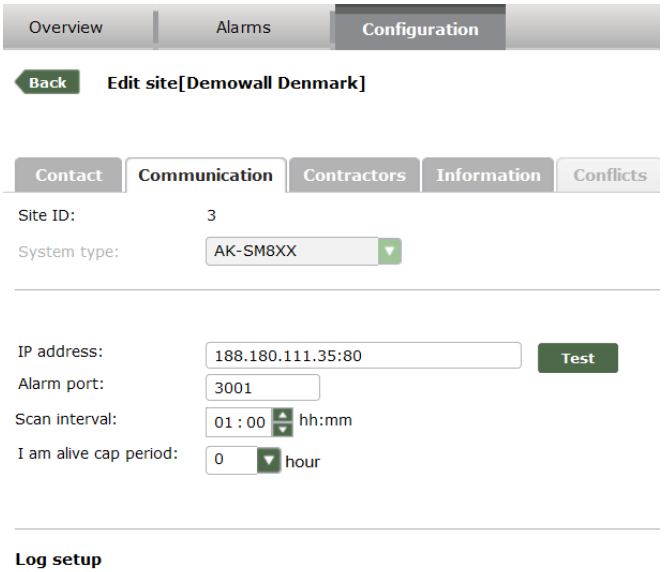


Enter the name and the other details for the new Site entry.
Comments and PDF's can be added to a site. Max. 5 PDF's with max. 10MByte per PDF are possible. Comments are not limited.

Choosing a chain, timezone and site name are mandatory.

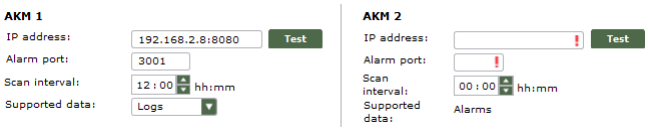
Adding an AK-SM 800 series or an AK-SC 355 site

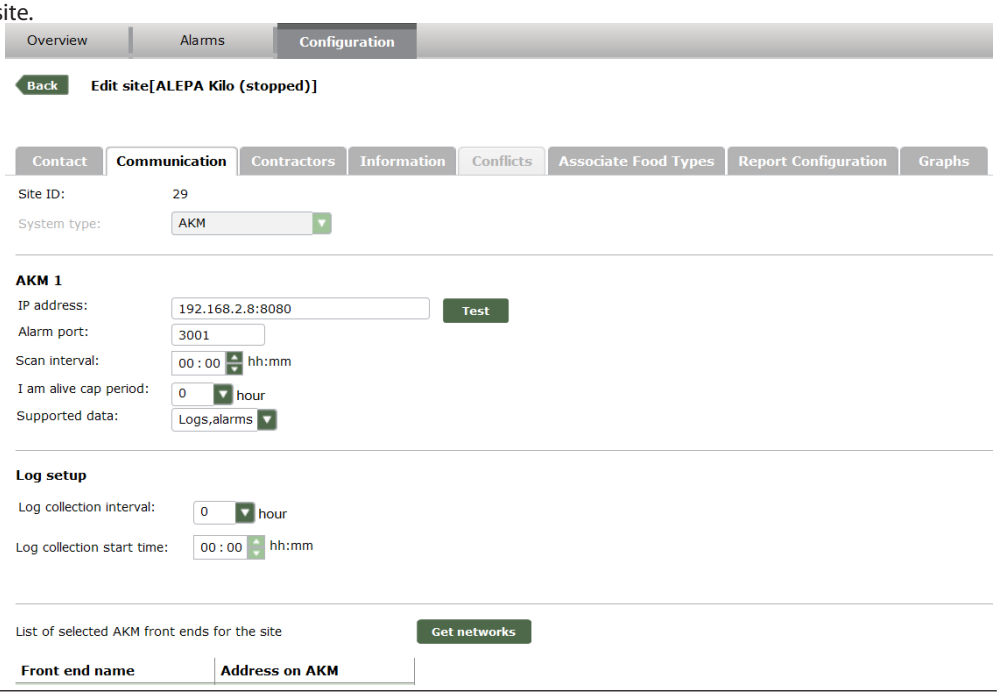
1. Select AK-SM 8xx, AK-SC 255 or AK-SC 355 as System Type
2. Insert IP address and Alarm Port for the unit, and verify that there is a successful connection by pressing the test button (add user name and password for this test)
3. Define how often the site connection should be scanned. This is to "ping" the front end or the AKM agent. If there is no response a system alarm will appear in the alarm list. This action is dependent on the contract between monitoring center and end-user. A typical value is once per day.
4. The cap period is the time frame where the AK-EM 800 expects to get an alarm from front.
   Example:
   AK-SM 850 sends test alarms every 3 hours and the cap period is 4 hours. The cap time will be reseted every time a test alarm is received. Otherwise a system alarm will appear in the current alarm list.
5. Select how often history log data should be collected from the site.
6. Type in user name and password of the unit. This is needed for write actions to the unit.



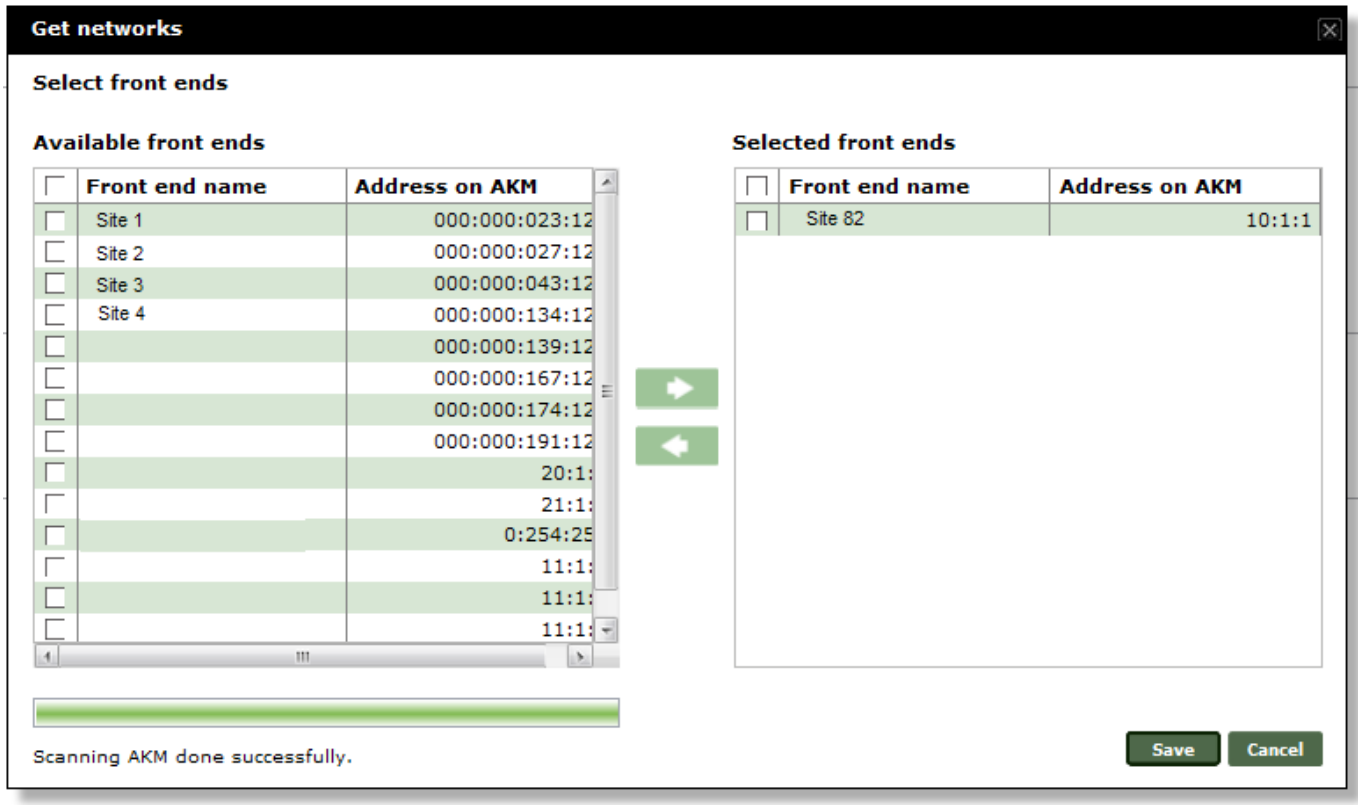
Adding a new AKM Site

1. Select AKM as System Type
2. Type the connection details for the AKM Agent, and verify that there is a successful connection to the AKM database.
3. Define how often the connection to the AKM agent should be scanned. Recommendation: This Scan interval makes only sense for one site. If the agent is handling several sites it's enough to scan the agent only once.
4. The cap period is the time frame where the AK-EM 800 expects to get an alarm from an AKM site.
   Example:
   To create frequently test alarms for AKM a SM720 can be programmed to send I'm alive alarms.
5. Choose what type of data is collected from this site. If only log an extra entry for alarm will be available.
6. Select how often history log data should be collected from AKM site. Recommendation for AKM. As AKM is collecting data only once per day, it makes no sense to use for AKM a shorter interval in AK-EM 800
7. Once there is a successful connection, retrieve all the networks in AKM to choose the one for this site.



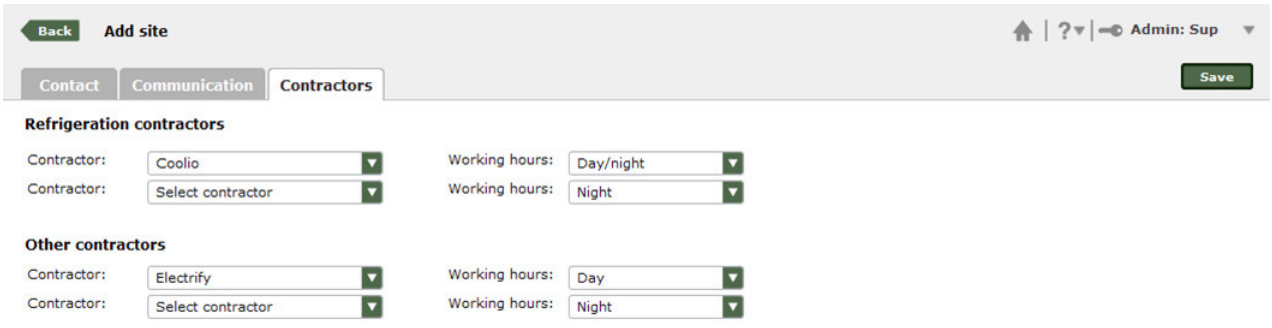


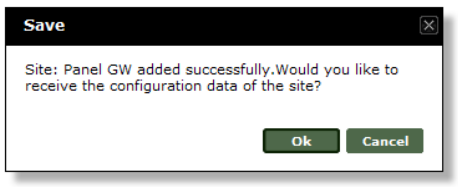
8. When the networks have been scanned, they will be on the left side. And must be selected. Once the selection is done, the selection must be saved. Remember to add both master and slaves.

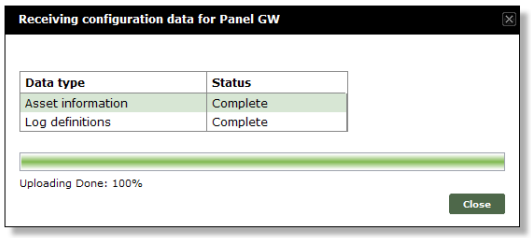


The contractor details can be added and the entry can be saved.

When saved, AK-EM 800 will retrieve asset and log details for the site.







Once a site has been added and asset details and log definitions has been retrieved some extra functions will be available

Information page
– Gives details about the assets and logs configured on the site

Conflicts
– Gives information about any conflicts with this site

A conflict is detected, if there is any difference between the AK-SM 800 database and the unit on site is detected. E.g. new or deleted history logs,...

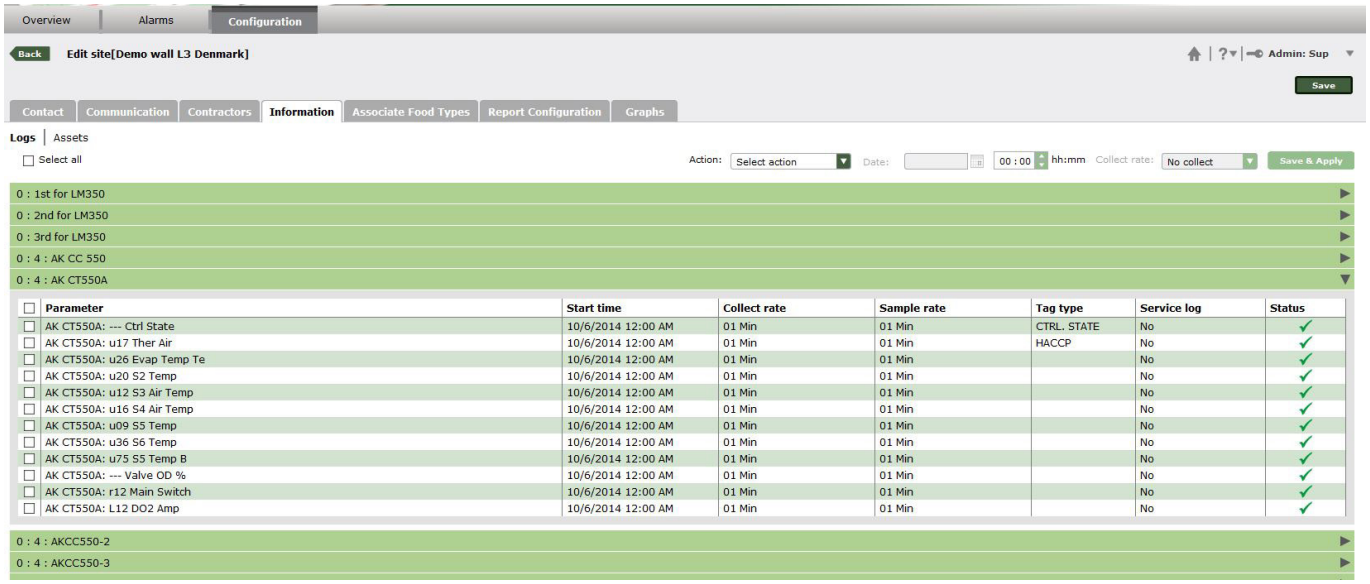
Associate food types
– Gives the possibility to add assets to defined food types

Report configuration
Possibility to create the conditions for
- HACCP reports
- TQ reports

Graphs
– Easy way to view graphs for the selected site

Site Information

On the Site information page it is possible to see the details that has been uploaded to the AK-EM 800 system, and the status e.g. a new log has been added to the system.



The user is able to enable only logs he likes to retrieve from a site. By default, nothing is selected, but all logs are collected.

In addition the user can change the collect rate (e.g. from site a 1 minute log is selected, but if a 10 minute log is good enough, the user can change the rate from here.)
1. Select the logs for the new sample rate (or select all)
2. Choose "Collect rate" in the "Action" drop down box.
3. Set the new sample rate in the "Collect rate" drop down box
4. Press the "Save & Apply" button

It is also possible to recollect data in case of data gaps.
1. Select the logs to recollect (or select all)
2. Choose "Start time" in the "Action" drop down box.
3. Set data and time
4. Press the "Save & Apply" button

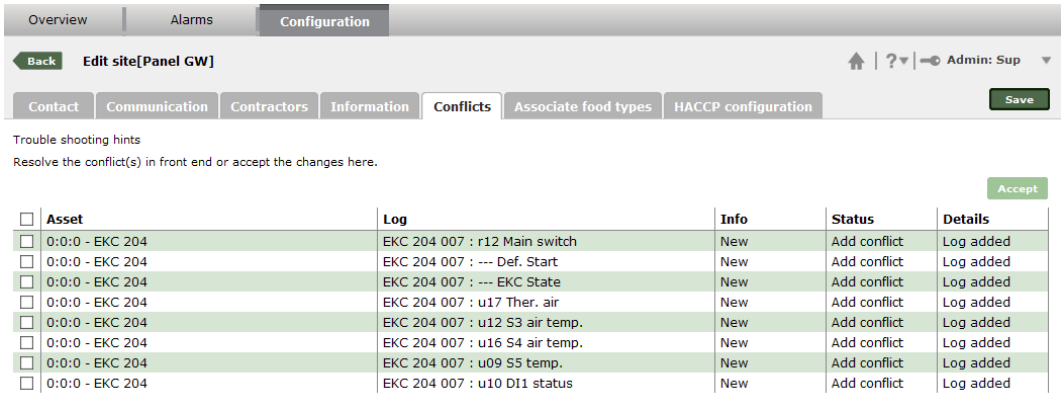
If the user like to do both in one go, he should choose "Both" in the "Action" drop down box.

Conflict

The Conflicts page is only presented if there is a conflict between the known details and the newly updated details, e.g. if log definition has been changed or a new asset is added etc.

Select the assets or parameters and press the Accept button to accept the changes

If a log has been deleted in the front end, the previously collected data for these assets will not be deleted.
Likewise if new parameters have been added in a log, they will also be collected, even though the user doesn't accept the changes first.



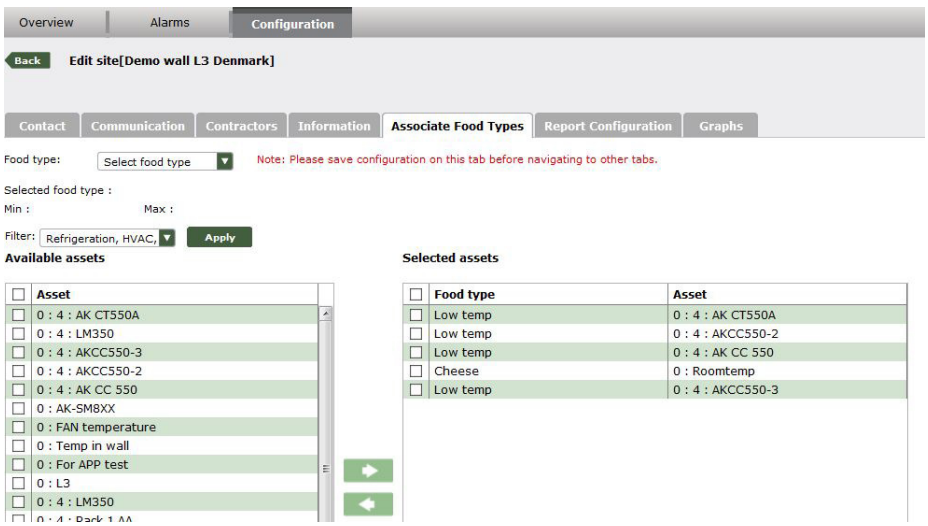
Food type Associations

If a site has been assigned to a chain and Food type data is available it is possible to make HACCP reports for that site.

1. Select the food type

2. Choose the controller that must be assigned to the chosen food type

3. Assign by clicking on the green "Right" arrow.



Report Configuration (HACCP and TQ)

Once the food types have been correctly assigned, it is time to select the parameters that must be added to the report.

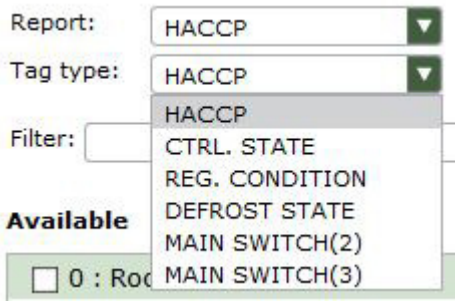
1. Choose the Tag type: Temperature, Defrost and Main Switch signal

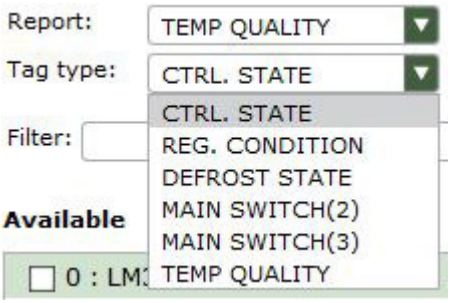
For HACCP or Temp quality sensor use e.g. "u12 S3 air", "u36 S6 Temp"

For Defrost signal use:
a. CTRL.STATE if the controller value delivers (parameter EKC State or Ctrl.State) 1,4,14 or 15 for defrost
if not available use
b. REG.CONDITION (parameter Reg.Cond)if value delivers 4 or 5
if not available use
c. Defrost State e.g. "u60 Def. relay or Defrost state". Value should be 1

For main switch signal use:
CTRL.STATE if the controller value delivers (parameter EKC State or Ctrl.State) 10,4,14 or 15 for defrost
if not available use
MAINSWITCH(2) (parameter r12 Mainswitch) controller delivers value 0 (0=off,1=On)
if not available use
MAINSWITCH(3) (parameter r12 Mainswitch) controller delivers

value -1 or 0 (0=off,1=On,-1=manual)

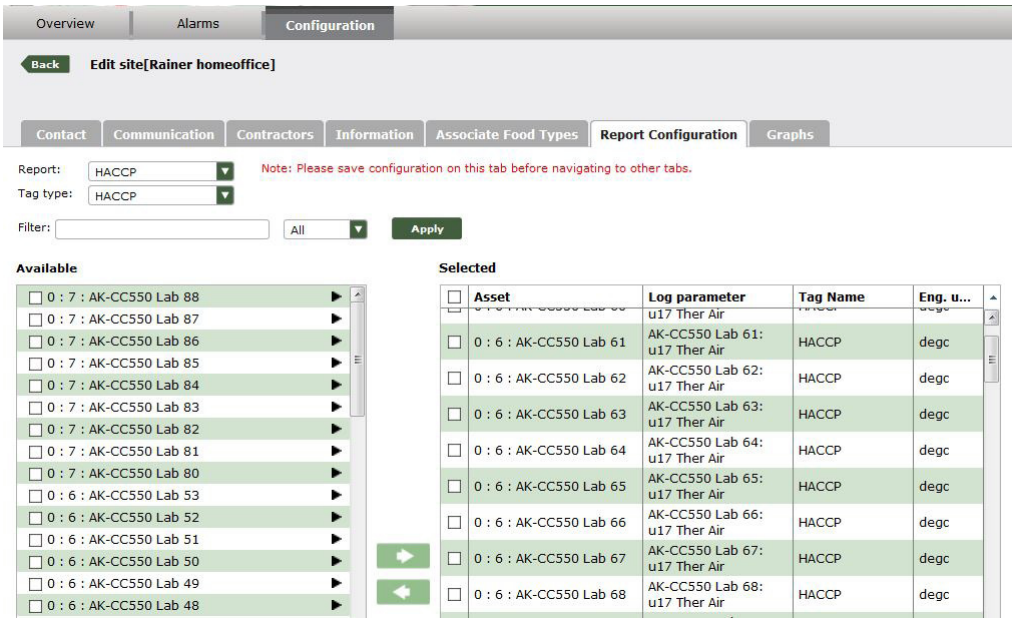




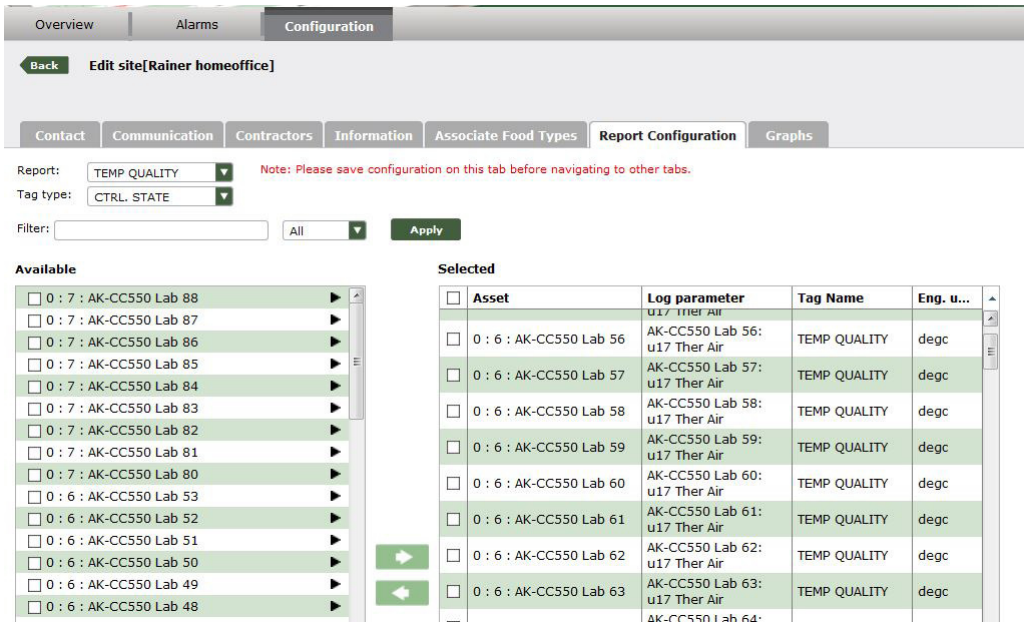
2. Select the parameter
Note: These parameter must be logged

3. Add them to the "Selected" list and save

Example: HACCP configuration



Example: TQ configuration



Graphs
- see custom graphing

Users

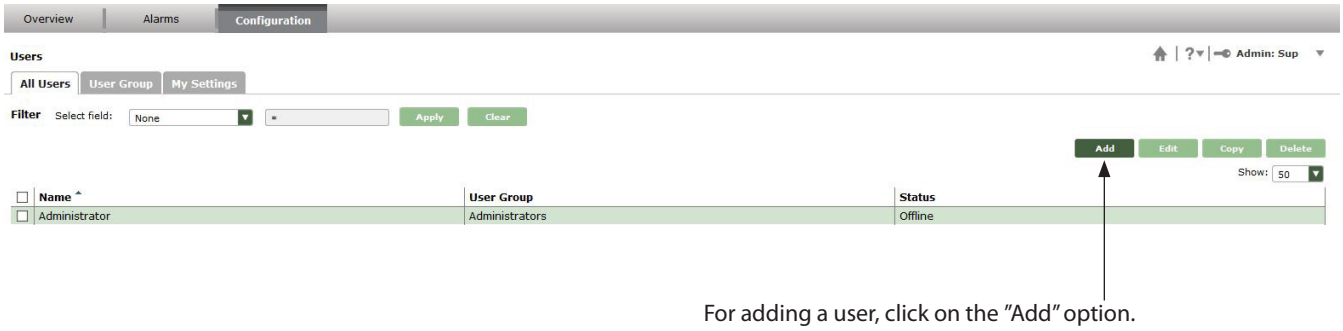
Select Configuration -> Users -> Users

The users function is divided into 3 pages

All users
– List of existing users with managing functions

User group
– List of defined user groups with managing functions

My Settings
– Settings for the user that is logged in



All Users page

There are by default 4 users created

Super Administrator
– This user has all rights at any time, and can not be deleted **(admin/danfoss)**

Administrator
– This user has all rights by default but can be altered **(administrator/danfoss)**

User
– This user has all rights except write access to the "Configuration" menu (**user/danfoss**)

Guest
– This user can view everything but not change anything **(guest/danfoss)**

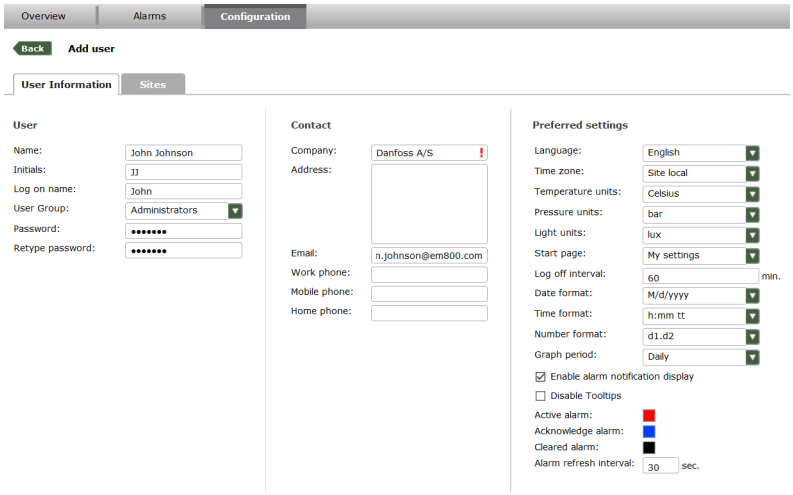
Adding a user

Some of the fields are mandatory and marked with a red "!"

Log on name can't be changed later and User Group association can't be changed by the user himself.
To disable the auto log off function, set the "Log off intervall" to zero.

If the user has forgotten his password, the Superadmin will be able to reset the user to the default password "danfoss"

Following languages are supported
- English
- German
- Portuguese
- Portuguese (Brazil)
- Russian
- Spanish (Mexico)
- Spanish
- Dutch
- French
- Italian
- Chinese

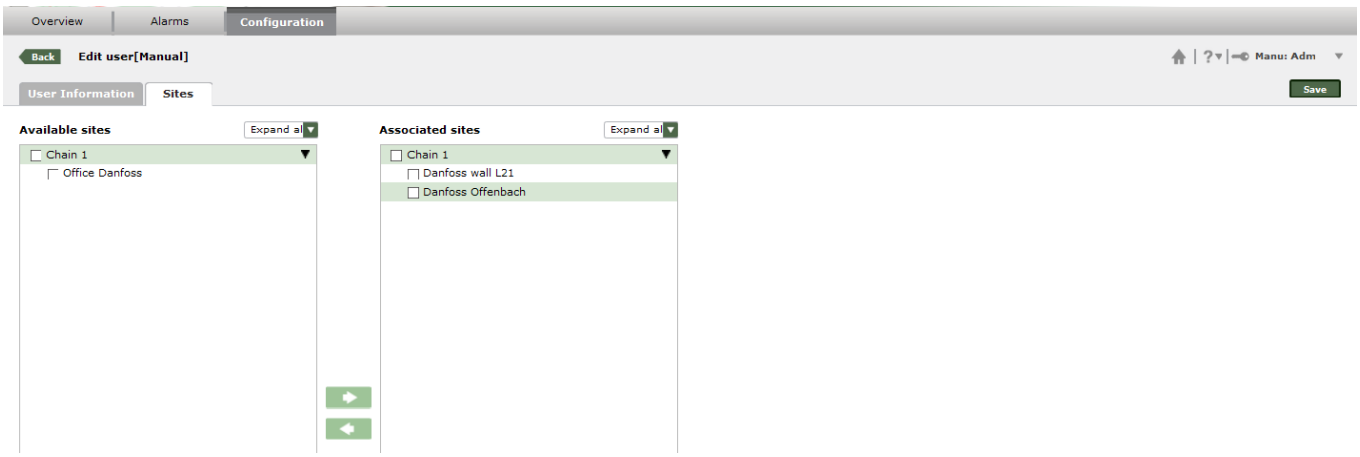


Site association to a user

1. Select which site to associate to selected user

2. Assign them by clicking on the "Right" arrow.

3. When all the settings have been made the new user can be created by pressing the Save button in the top right corner



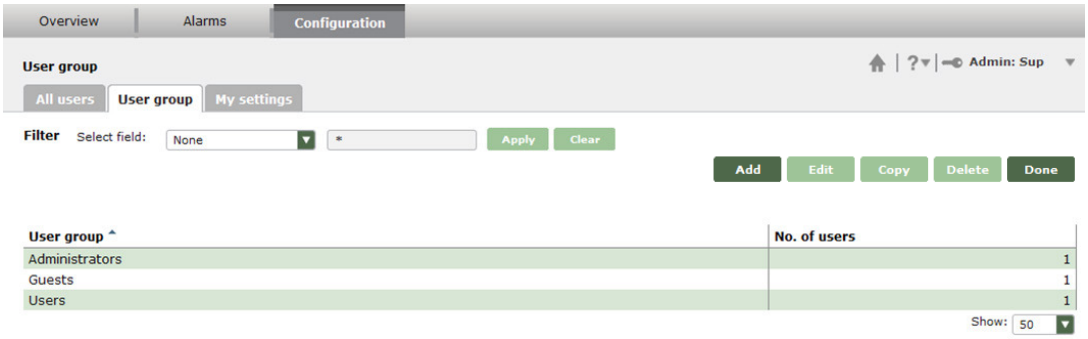
User Groups page

This is where user groups can be added or existing User groups can be changed.

There are 4 User groups by default with different restrictions.

Super admin, Administrators, Users and Guests.

1. For adding a User group, click on "Manage" and select the "Add" option.



Adding a new user group

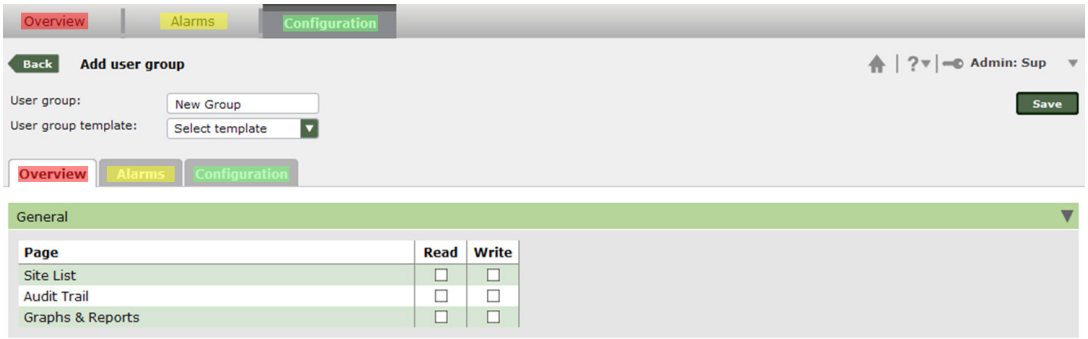
When creating a new "User group" the admin must decide what pages the new User group must have read and write access to.

There are three tabs, where each of them represents a menu group. In every menu group the admin can choose the read or write access for each page.

1. The name for the new menu group must be entered here

2. If required the new group can be based on of the already existing user groups.

3. Assign rights



Read access will let the user view information for the respective page

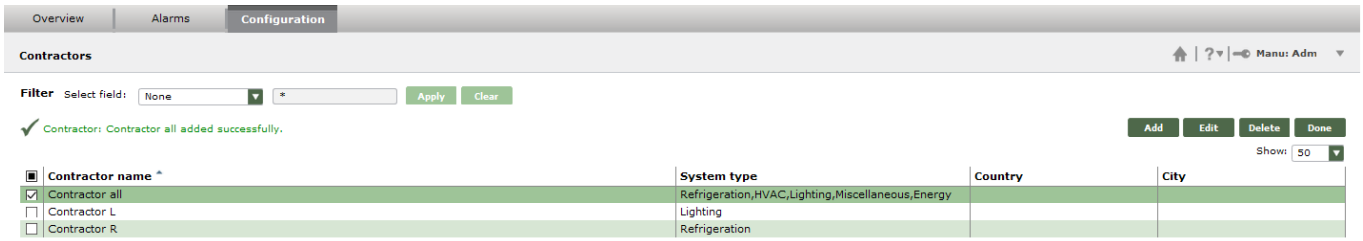
Write access will let the user change information for the respective page

Contractors

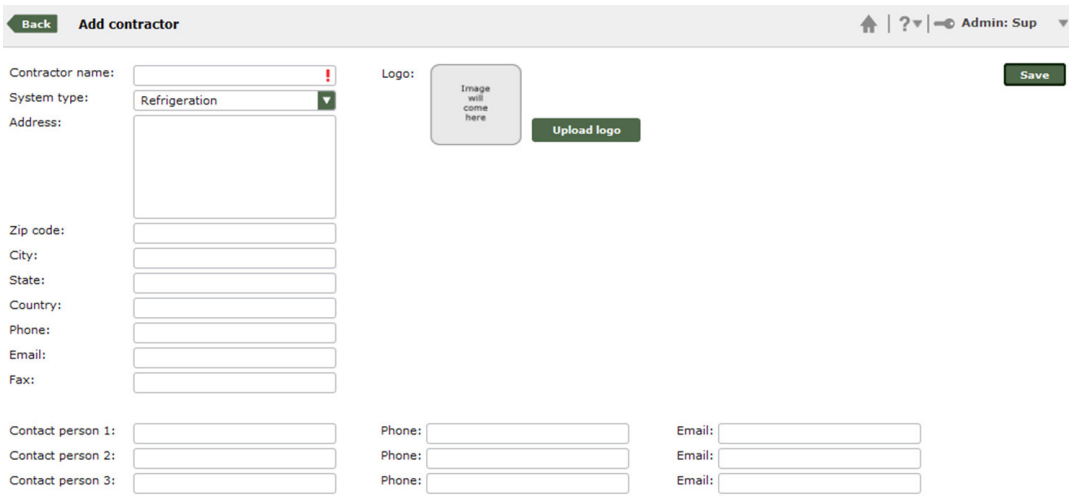
Select Configuration -> Users -> Contractors

A contractor is the person that has the technical knowledge regarding the installation, and will be the one to contact if something has to be changed on the installation.

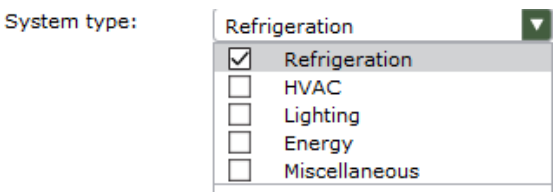
For adding a Contractor, click on "Manage" and select the "Add" option.



When the Contractor informations has been added, the entry must be saved.
When creating a site entry in the system, the contractors can be assigned for that site.



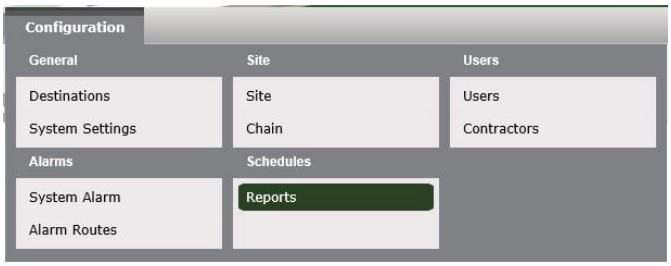
Choose which type of contractor it is



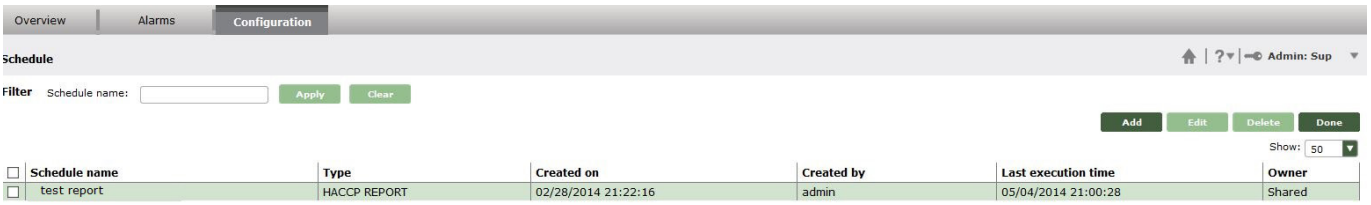
Scheduled Reports

Select Configuration -> Schedules -> Reports

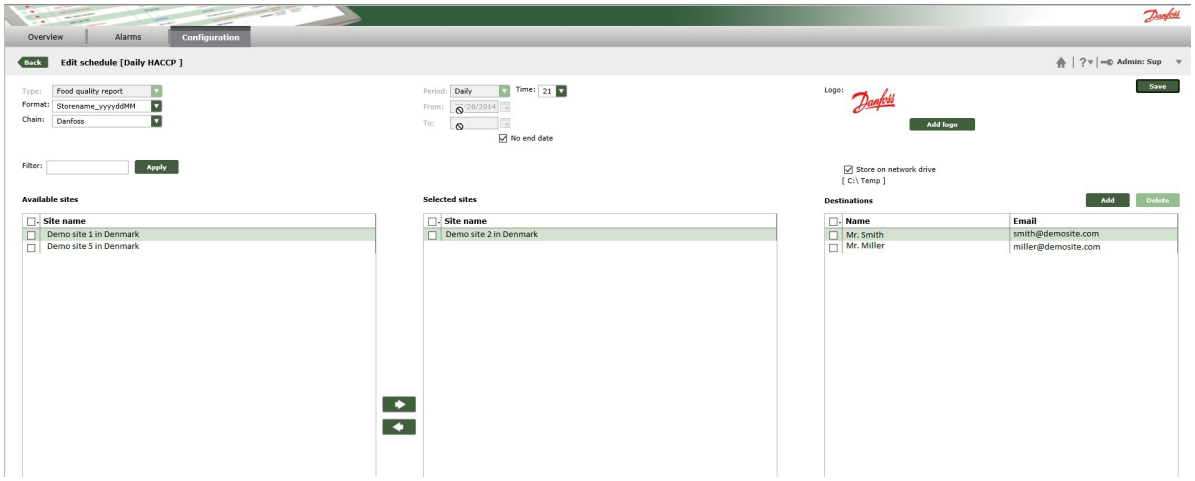
A scheduled report is today a HACCP or TQ report you like to forward on a frequently basis to one or more Email addresses.



To add a reports click on "Add". As usual Manage opens also the menu to edit or delete an existing schedule.

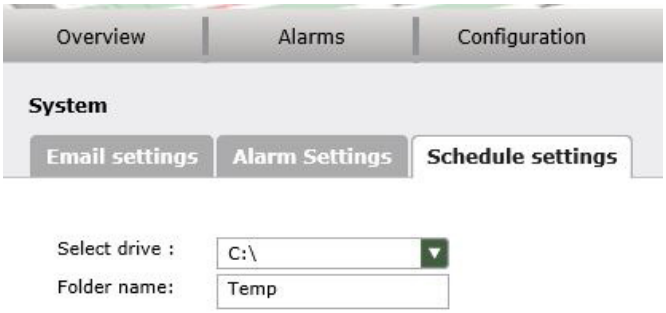


To schedule a HACCP report, the store must been setup before with food types, association of food types and the HACCP configuration (see corresponding chapter).
Insert also the report type (today only HACCP and Temperature Quality are available), the format of the file name and the chain.
Afterwards, you have to the select one or more sites (from available to selected sites) and the Email destinations. The destinations are defined before under menu configuration – destination.



The user can select, if the report should run for a period only (from to) or if the report should have no end date.
Select also the time when the report will be send out.

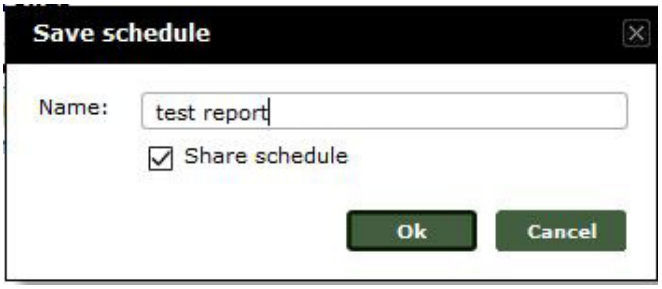
There is also a possibility to store the HACCP PDF on a network drive. The location can be defined in the system settings. (Configuration – System settings – Schedule settings)

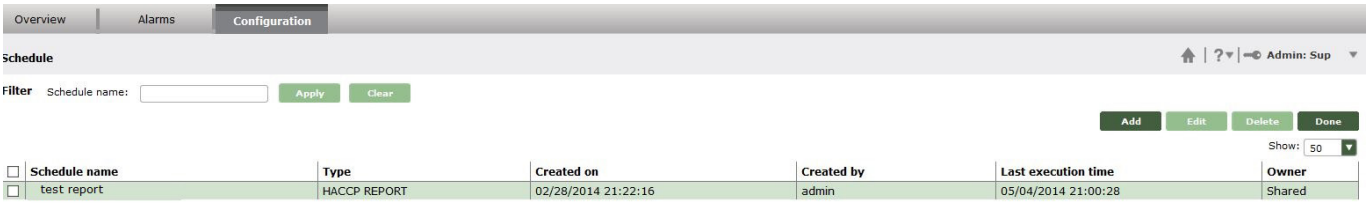


As usual, a logo for the report can be selected.

After finishing all details, the report must be saved. A message box will appear and allows the user to give the schedule a name and also if the report will be shared with other users or not.

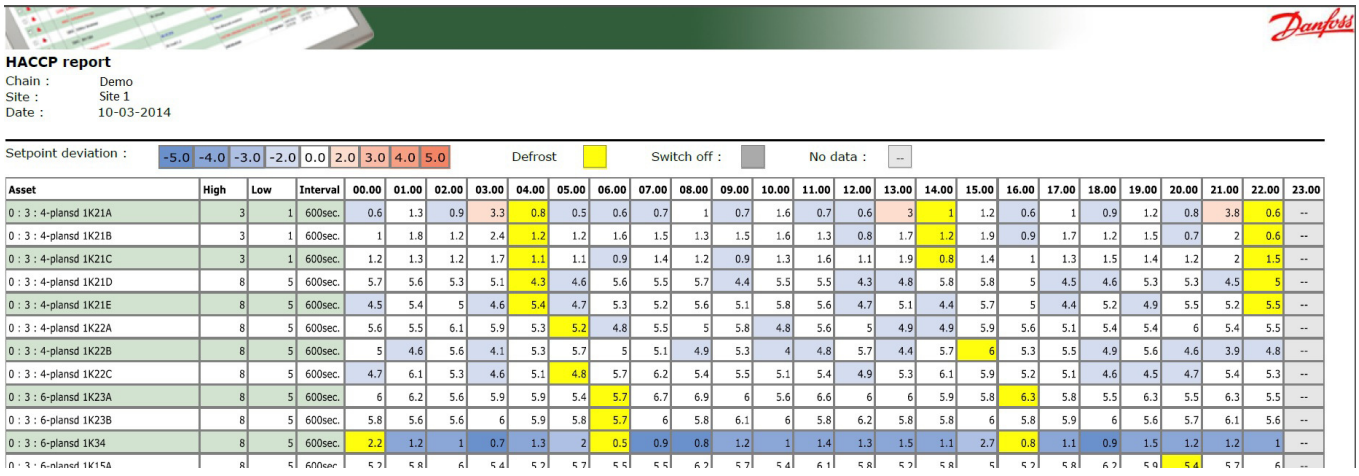
Afterwards the report is listed in the overview





The user can see the name of the report, when it was created and also when it was last time executed.

The result should be a report with a PDF attachment. The PDF contains HACCP data (see example below)



HACCP report

Chain : Demo
Site : Site 1
Date : 10-03-2014

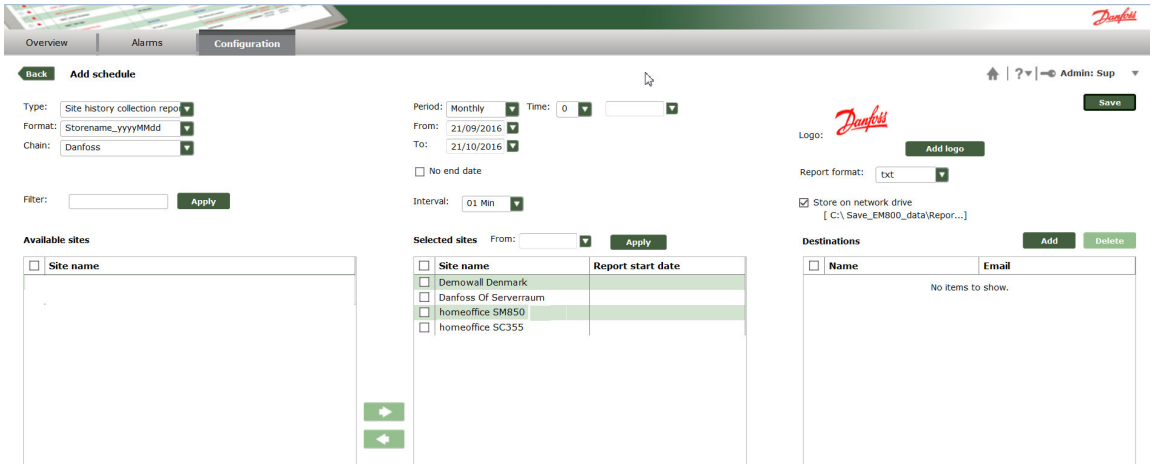
Setpoint deviation : -5.0 -4.0 -3.0 -2.0 0.0 2.0 3.0 4.0 5.0 Defrost Switch off : No data :

Asset	High	Low	Interval	00.00	01.00	02.00	03.00	04.00	05.00	06.00	07.00	08.00	09.00	10.00	11.00	12.00	13.00	14.00	15.00	16.00	17.00	18.00	19.00	20.00	21.00	22.00	23.00
0 : 3 : 4-plansd 1K21A	3	1	600sec.	0.6	1.3	0.9	3.3	0.8	0.5	0.6	0.7	1	0.7	1.6	0.7	0.6	3	1	1.2	0.6	1	0.9	1.2	0.8	3.8	0.6	--
0 : 3 : 4-plansd 1K21B	3	1	600sec.	1	1.8	1.2	2.4	1.2	1.2	1.6	1.5	1.3	1.5	1.6	1.3	0.8	1.7	1.2	1.9	0.9	1.7	1.2	1.5	0.7	2	0.6	--
0 : 3 : 4-plansd 1K21C	3	1	600sec.	1.2	1.3	1.2	1.7	1.1	1.1	0.9	1.4	1.2	0.9	1.3	1.6	1.1	1.9	0.8	1.4	1	1.3	1.5	1.4	1.2	2	1.5	--
0 : 3 : 4-plansd 1K21D	8	5	600sec.	5.7	5.6	5.3	5.1	4.3	4.6	5.6	5.5	5.7	4.4	5.5	5.5	4.3	4.8	5.8	5.8	5	4.5	4.6	5.3	5.3	4.5	5	--
0 : 3 : 4-plansd 1K21E	8	5	600sec.	4.5	5.4	5	4.6	5.4	4.7	5.3	5.2	5.6	5.1	5.8	5.6	4.7	5.1	4.4	5.7	5	4.4	5.2	4.9	5.5	5.2	5.5	--
0 : 3 : 4-plansd 1K22A	8	5	600sec.	5.6	5.5	6.1	5.9	5.3	5.2	4.8	5.5	5	5.8	4.8	5.6	5	4.9	4.9	5.9	5.6	5.1	5.4	5.4	6	5.4	5.5	--
0 : 3 : 4-plansd 1K22B	8	5	600sec.	5	4.6	5.6	4.1	5.3	5.7	5	5.1	4.9	5.3	4	4.8	5.7	4.4	5.7	6	5.3	5.5	4.9	5.6	4.6	3.9	4.8	--
0 : 3 : 4-plansd 1K22C	8	5	600sec.	4.7	6.1	5.3	4.6	5.1	4.8	5.7	6.2	5.4	5.5	5.1	5.4	4.9	5.3	6.1	5.9	5.2	5.1	4.6	4.5	4.7	5.4	5.3	--
0 : 3 : 6-plansd 1K23A	8	5	600sec.	6	6.2	5.6	5.9	5.9	5.4	5.7	6.7	6.9	6	5.6	6.6	6	6	5.9	5.8	6.3	5.8	5.5	6.3	5.5	6.3	5.5	--
0 : 3 : 6-plansd 1K23B	8	5	600sec.	5.8	5.6	5.6	6	5.9	5.8	5.7	6	5.8	6.1	6	5.8	6.2	5.8	5.8	6	5.8	5.9	6	5.6	5.7	6.1	5.6	--
0 : 3 : 6-plansd 1K34	8	5	600sec.	2.2	1.2	1	0.7	1.3	2	0.5	0.9	0.8	1.2	1	1.4	1.3	1.5	1.1	2.7	0.8	1.1	0.9	1.5	1.2	1.2	1	--
0 : 3 : 6-plansd 1K15A	8	5	600sec.	5.2	5.8	6	5.4	5.2	5.7	5.5	5.5	6.2	5.7	5.4	6.1	5.8	5.2	5.8	5	5.2	5.8	6.2	5.9	5.4	5.7	6	--

Site history collection report

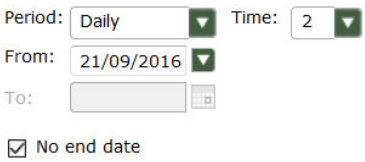
AK-EM 800 is able to send logs as CSV or TXT attachment by Mail.

1. Select type "Site history collection report"
2. Select the file format
3. Select the chain
4. Select the site(s) for the export

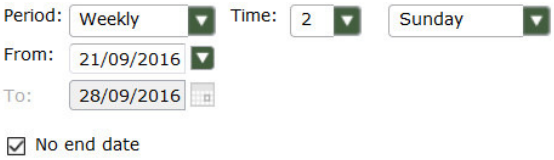


The user can choose, if he wants to have the report

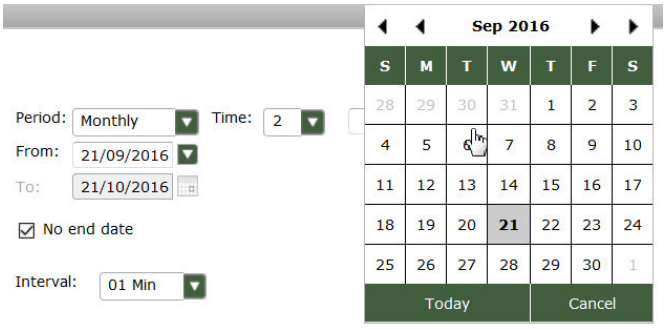
1. Daily:
   Select Start date and send time



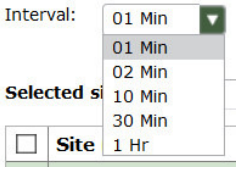
2. Weekly
   Select Start date, Day of the week and send time



3. Monthly
   Select start date, date of the month and send time

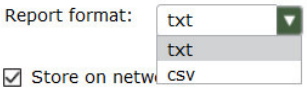


The use can also select the interval. E.g. If the log in in mute interval, but the user needs it different in the CSV or TXT file, he is able to change the interval here. If the logs are in different intervals, they will be aligned. Selectable intervals are 1, 2, 10, 30 and 60 minutes.



The format can be chosen between TXT or CSV.

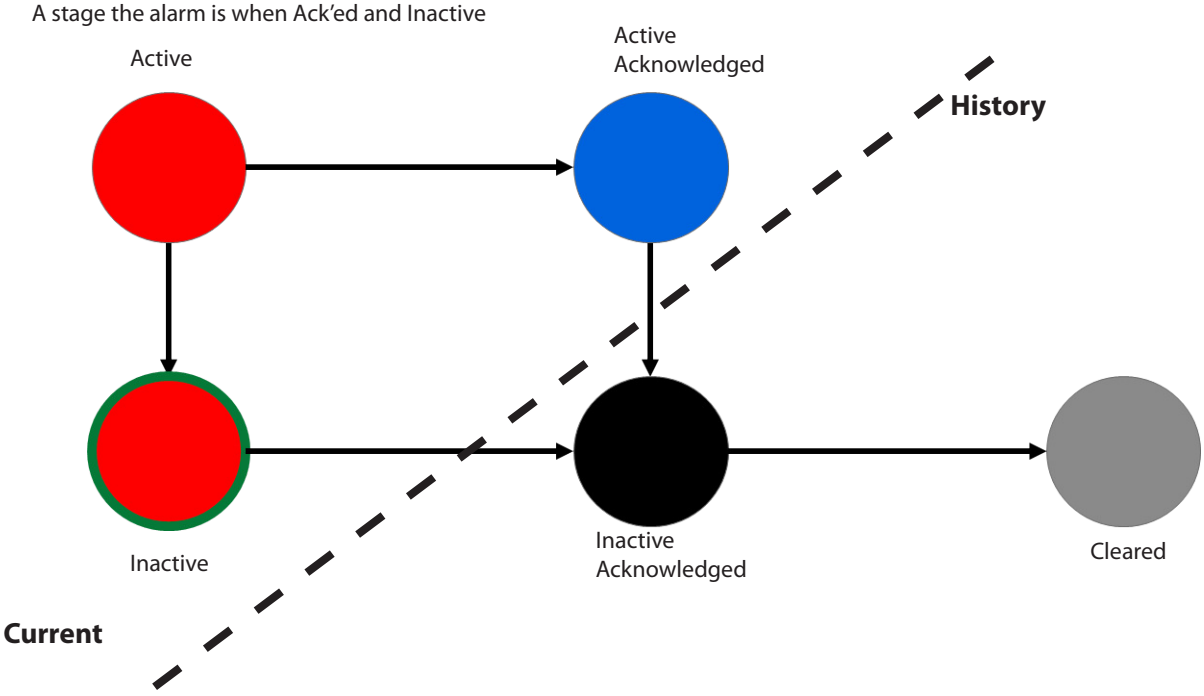
The rest is identical with all other reports.



Alarms

The graphic below describes the work flow of an alarm and how it's handled in AK-EM 800.

Active: An alarm situation is present on site
Inactive: An alarm situation is not present on site
Acknowledged: A User has accepted this alarm
Cleared: A stage the alarm is when Ack'ed and Inactive



Alarm Lists

Select Alarm -> Alarm Lists

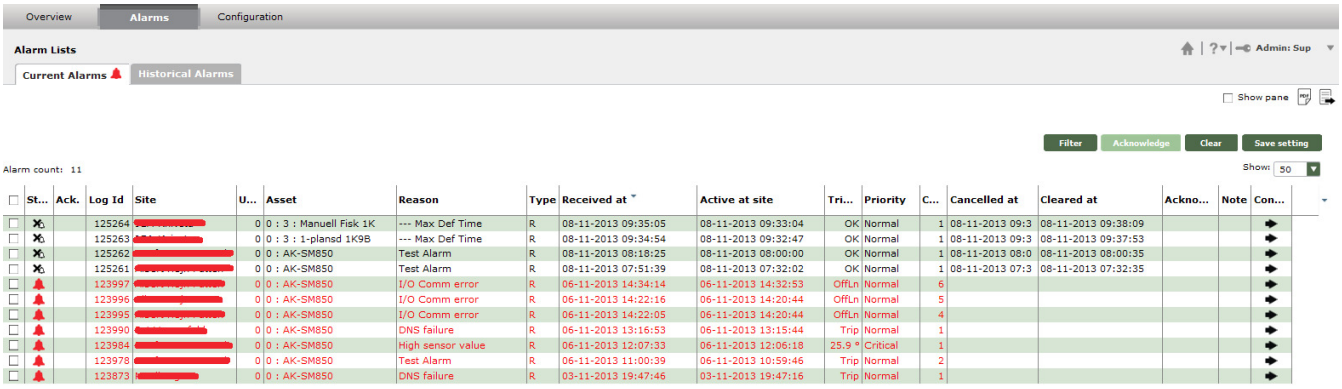
The Alarm Lists function contains 2 pages by default, Current Alarms and Historical Alarms, where the alarms which are not acknowledged will be listed in the Current alarms list.

If the alarm has been acknowledged by a user it will be shown with a tick mark in the "Ack" column and the colour for that alarm will change according to the settings for the logged in user.

When cancelled and acknowledged it will be moved to Historical alarms.

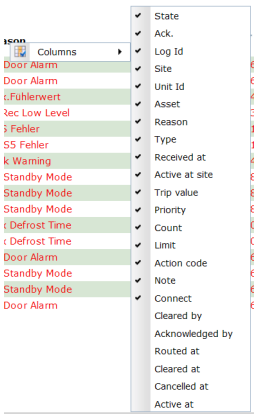
An alarm can be acknowledged and cleared by selecting it and choosing one of the available options.

Reorganizing of columns is possible by drag&drop of the headlines



St...	Ack.	Log Id	Site	U...	Asset	Reason	Type	Received at	Active at site	Tri...	Priority	C...	Cancelled at	Cleared at	Ackno...	Note	Con...
		125264	[redacted]	0	0 : 3 : Manuell Fisk 1K	--- Max Def Time	R	08-11-2013 09:35:05	08-11-2013 09:33:04	OK	Normal	1	08-11-2013 09:3	08-11-2013 09:38:09			
		125263	[redacted]	0	0 : 3 : 1-plansd 1K9B	--- Max Def Time	R	08-11-2013 09:34:54	08-11-2013 09:32:47	OK	Normal	1	08-11-2013 09:3	08-11-2013 09:37:53			
		125262	[redacted]	0	0 : AK-SM850	Test Alarm	R	08-11-2013 08:18:25	08-11-2013 08:00:00	OK	Normal	1	08-11-2013 08:0	08-11-2013 08:00:35			
		125261	[redacted]	0	0 : AK-SM850	Test Alarm	R	08-11-2013 07:51:39	08-11-2013 07:32:02	OK	Normal	1	08-11-2013 07:3	08-11-2013 07:32:35			
		123997	[redacted]	0	0 : AK-SM850	I/O Comm error	R	06-11-2013 14:34:14	06-11-2013 14:32:53	OffLn	Normal	6					
		123996	[redacted]	0	0 : AK-SM850	I/O Comm error	R	06-11-2013 14:22:16	06-11-2013 14:20:44	OffLn	Normal	5					
		123995	[redacted]	0	0 : AK-SM850	I/O Comm error	R	06-11-2013 14:22:05	06-11-2013 14:20:44	OffLn	Normal	4					
		123990	[redacted]	0	0 : AK-SM850	DNS failure	R	06-11-2013 13:16:53	06-11-2013 13:15:44	Trip	Normal	1					
		123984	[redacted]	0	0 : AK-SM850	High sensor value	R	06-11-2013 12:07:33	06-11-2013 12:06:18	25.9 °	Critical	1					
		123978	[redacted]	0	0 : AK-SM850	Test Alarm	R	06-11-2013 11:00:39	06-11-2013 10:59:46	Trip	Normal	2					
		123873	[redacted]	0	0 : AK-SM850	DNS failure	R	03-11-2013 19:47:46	03-11-2013 19:47:16	Trip	Normal	1					

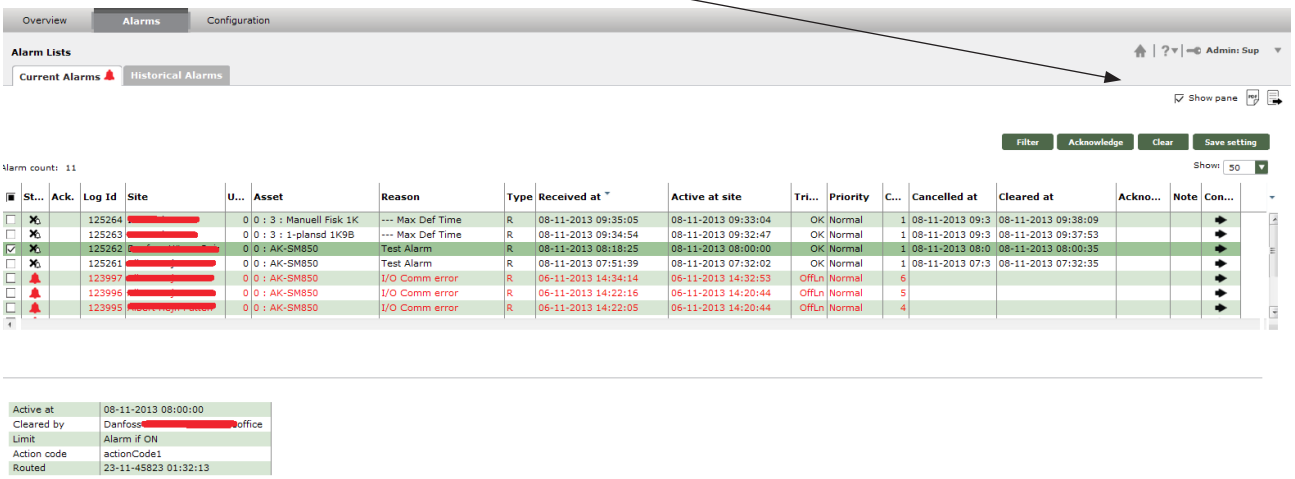
Add and delete columns is possible as well. Select a column with the right mouse button and a selection list appears.
For both actions, add/delete colums or reanrange columns the user should press the save setting button. On next logon the changed list will appear again.



By selecting the "Show Pane" option it is possible to see more details for one selected alarms

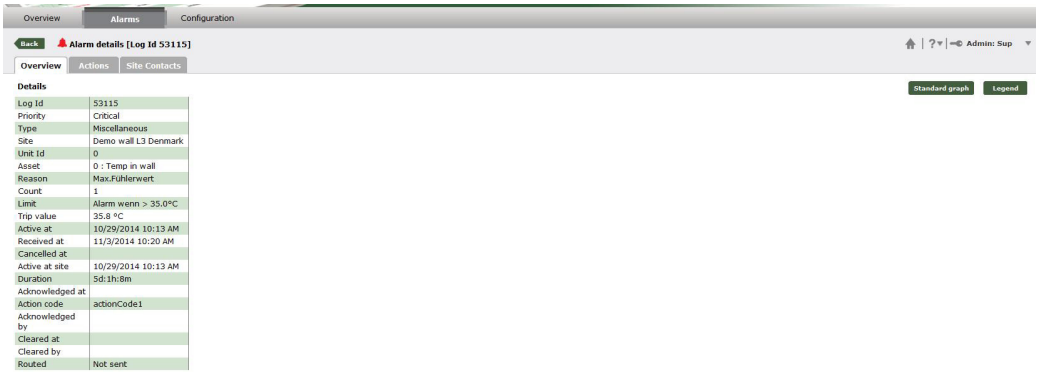
1. Tick mark the Show Pane option

2. Select an alarm to see more details for that alarm

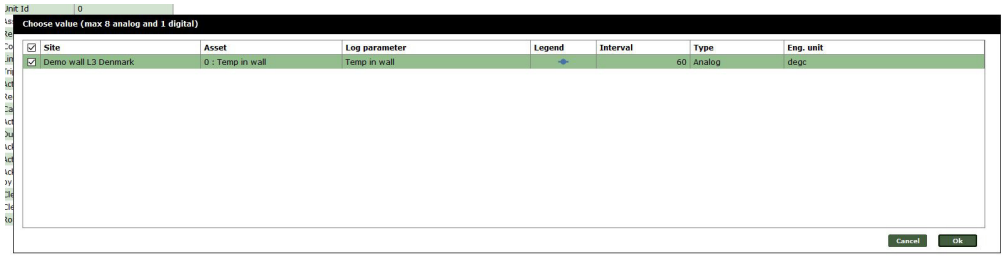


To see more details for an alarm, the user can double click an entry.
Then three new pages will be presented.

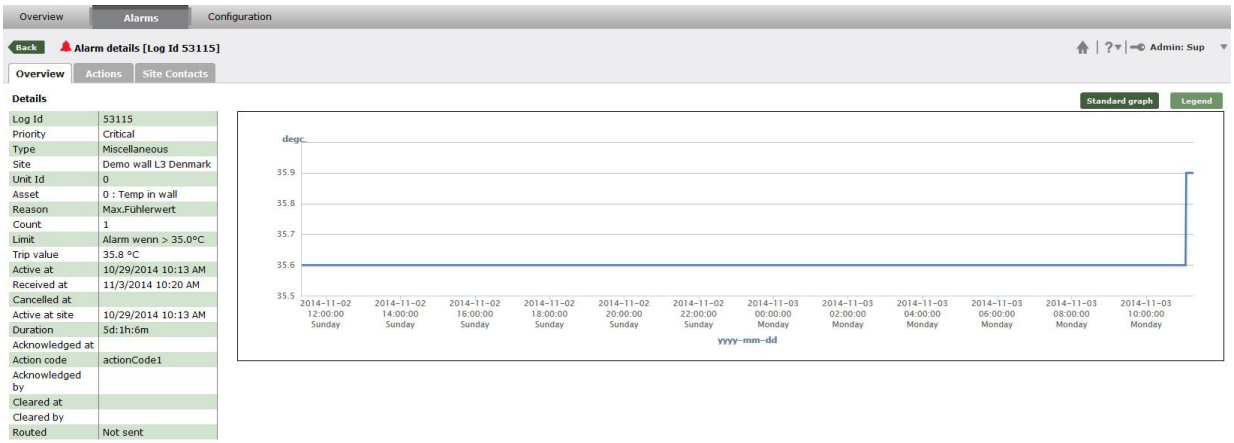
The Overview page has a few more details than the list e.g. when the alarm was cancelled and a calculation of the duration



Press button "Legend" to get details about what history log is available for this particular alarm and select the log(s).

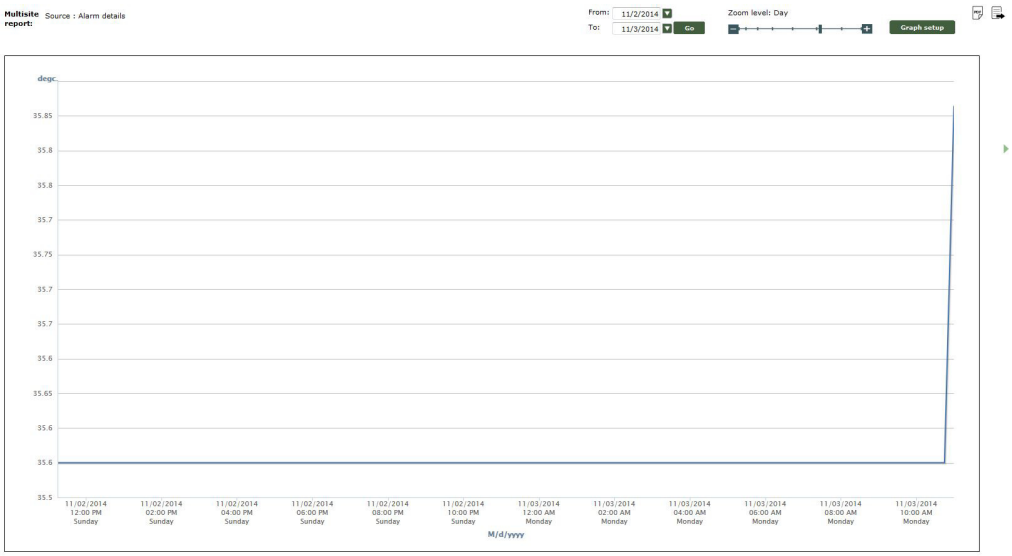


Press Ok to get the log(s) presented. The graph will show, what's available in the database. In parallem EM800 logs into the frontend and collects the newest data. This will take a few seconds, before updated data are presented.



Log Id	53115
Priority	Critical
Type	Miscellaneous
Site	Demo wall L3 Denmark
Unit Id	0
Asset	0 : Temp in wall
Reason	Max.Fühlerwert
Count	1
Limit	Alarm wenn > 35.0°C
Trip value	35.8 °C
Active at	10/29/2014 10:13 AM
Received at	11/3/2014 10:20 AM
Cancelled at	
Active at site	10/29/2014 10:13 AM
Duration	5d:1h:6m
Acknowledged at	
Action code	actionCode1
Acknowledged by	
Cleared at	
Cleared by	
Routed	Not sent

If the resolution of the graph is not good enough, or the user needs to see data from previous time he should press the button "Standard graph". The user is now able to change the timeframe or export the graph to PDF/XML.



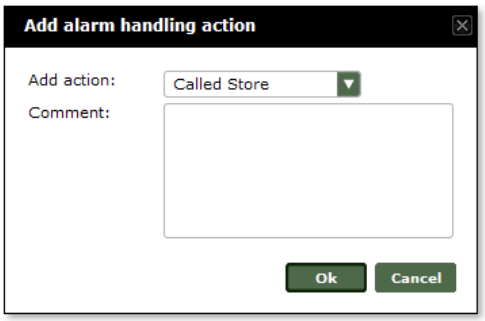
In the Actions page it is possible to see already written comments and add new comments

1. To add a new comment press the Add action button

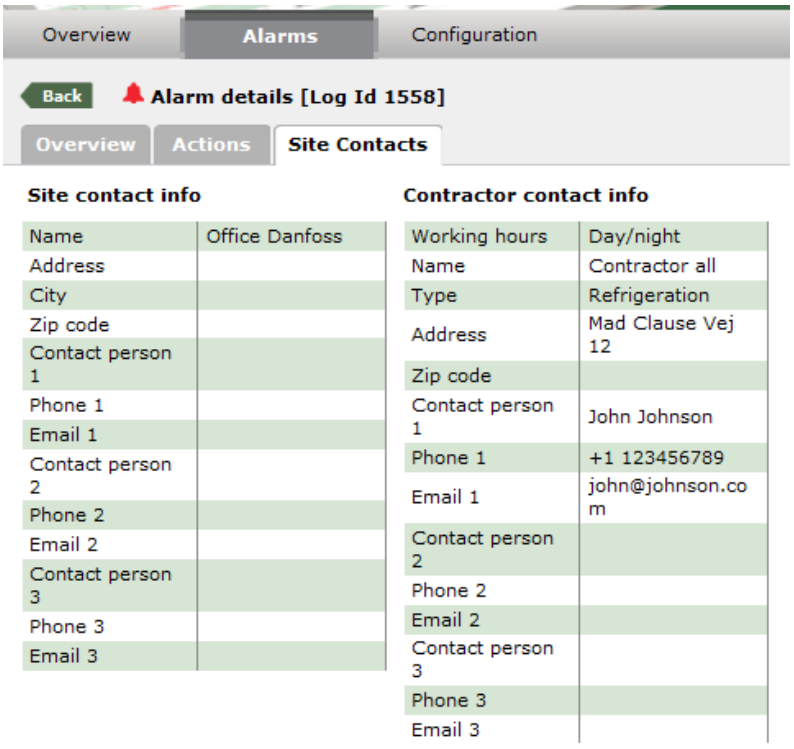
2. Select action

3. Add comment

4. Save entry by pressing OK



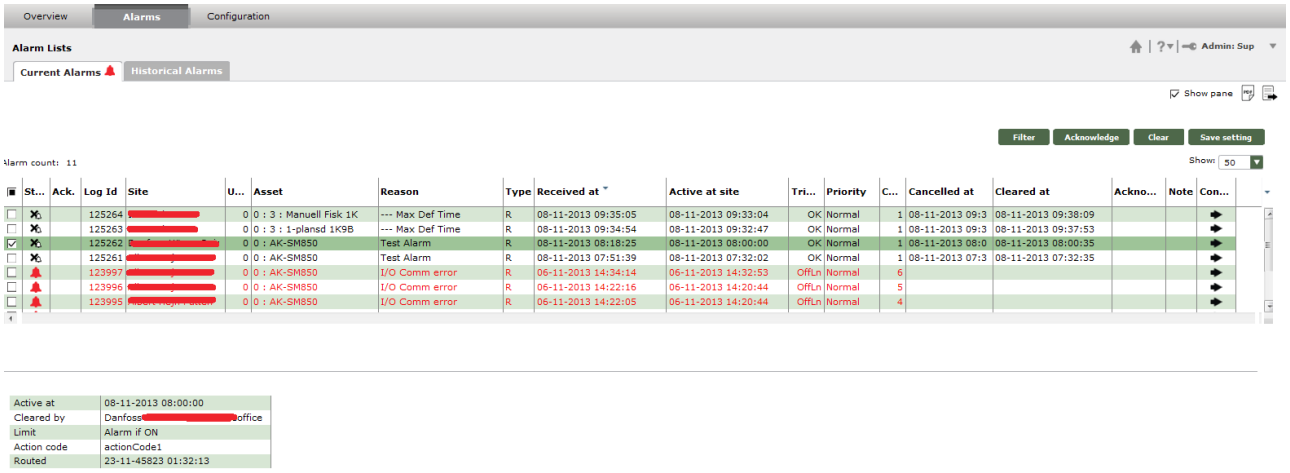
On the Site contacts page it is possible to see all entered details about the Site and Contractors, so the monitoring company can take quick action.



Filtered Alarm Lists

It is also possible to make filtered alarm lists

To make a filtered list, press the filter option



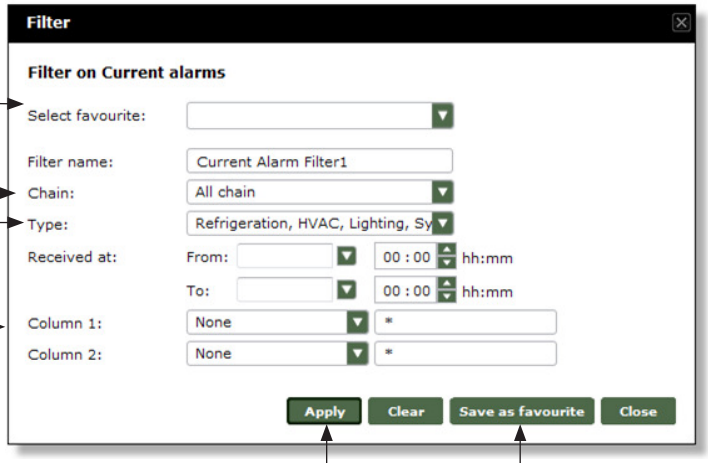
It is possible to open an existing filter settings, or create a new filter.
When choosing the different filter settings they can be edited or left as they are.

If a filter already has been made and saved, it can be chosen in the list.

To filter on a specific chain level

Which type of alarms you want to see

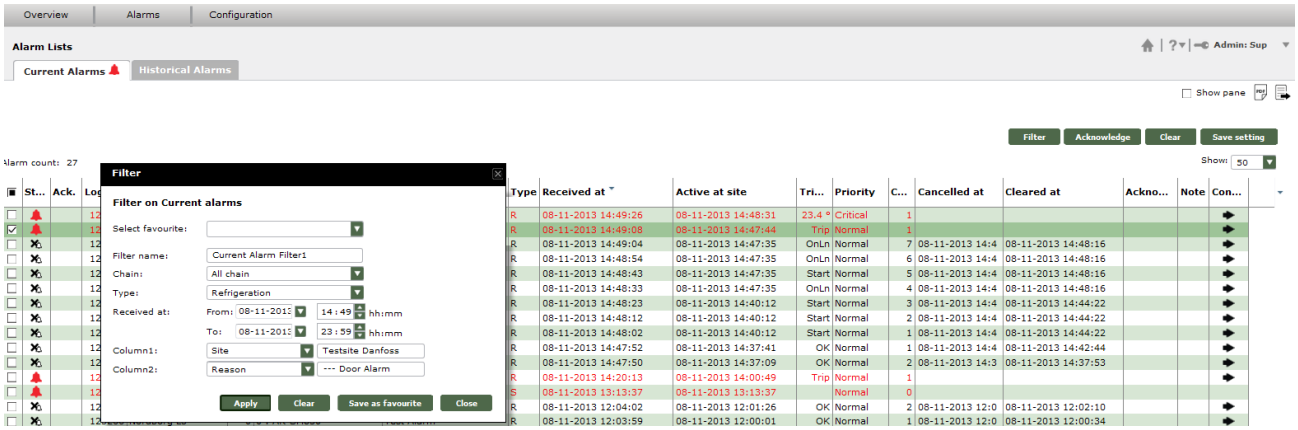
It is also possible to filter on a specific column e.g. Site name.



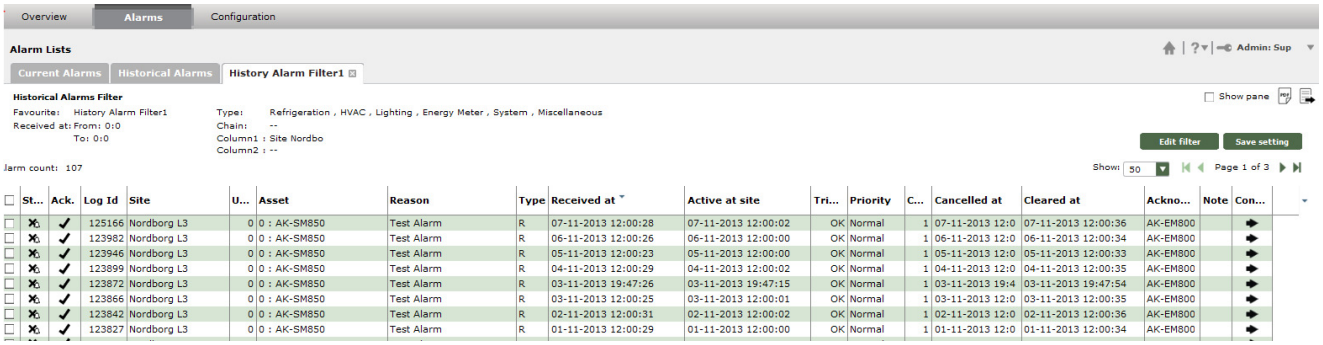
To enable the filtered view press Apply

If required the filter can be saved and opened later.

A quicker way to make a filter is also possible.
If an alarm is already selected and then the "Filter" button is pressed, there will be some pre-selected values in the filter already.



When the filter has been applied a new page with the filtered alarms will be present where the filter settings can be seen as well.

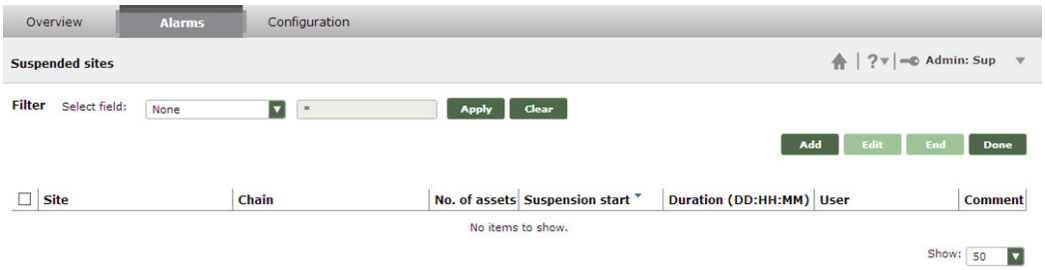


Suspended Alarms

Select Alarm -> Suspended sites / Assets

From the AK-EM 800 system, it is possible to suspend the alarms received from a Chain, site or an asset.

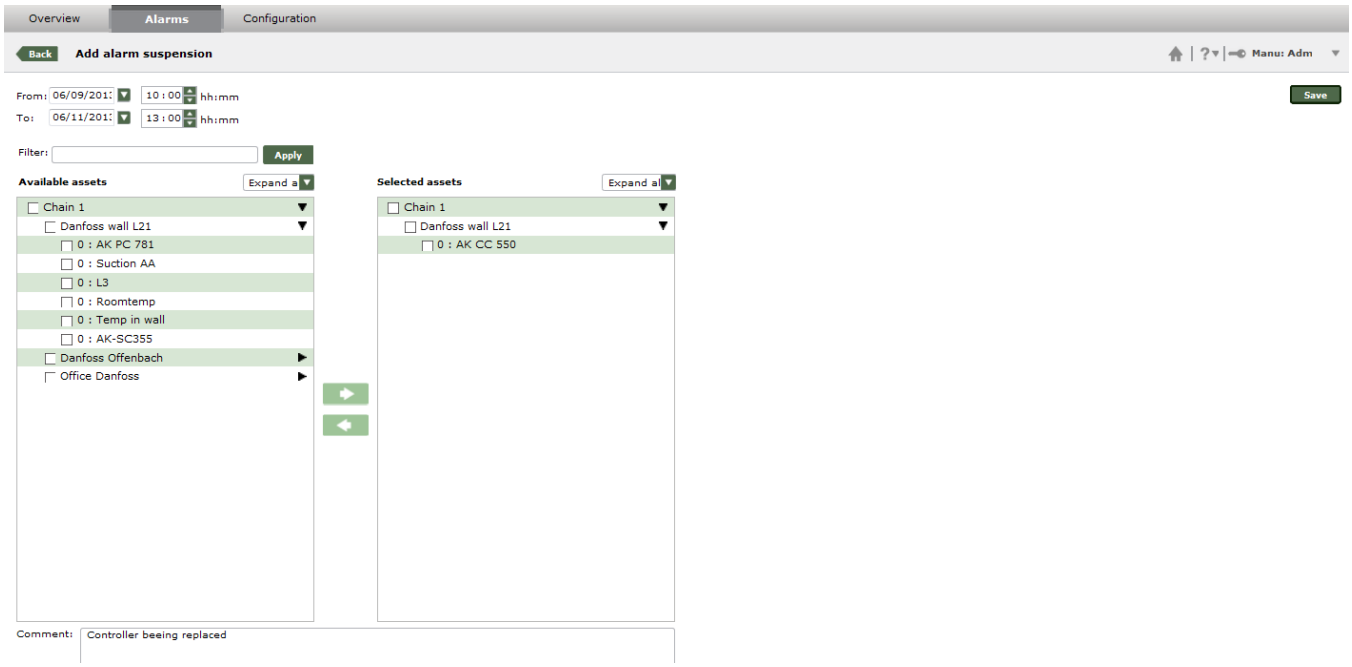
To add a new suspension rule click on Manage and press "Add"



1. Select the duration for the suspension

2. Select which site or asset should be suspended

3. Add a comment and Save

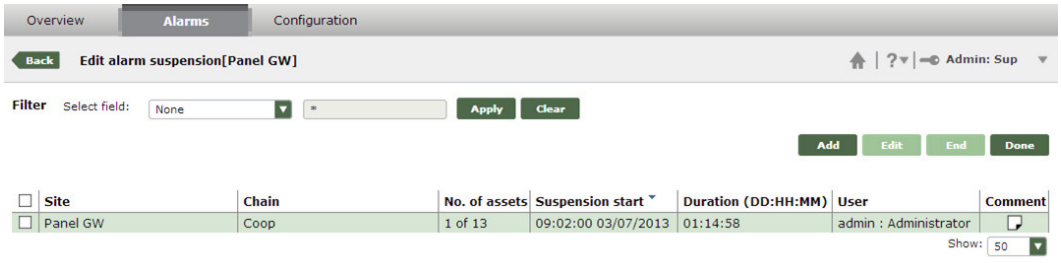


When a suspension has been added it will be shown in the list.

It is also possible to see more details about that particular suspension, e.g. the amount of time left before the suspension is cancelled.

The entry in the list will automatically be deleted from the list when the suspension is over.

To stop suspension before time, select the correct suspension line and press the End button.



Overview

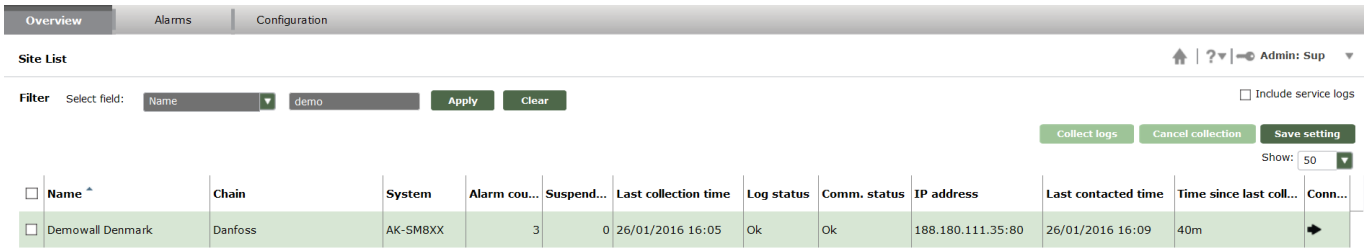
Site Lists

Select Overview -> General ->Site Lists

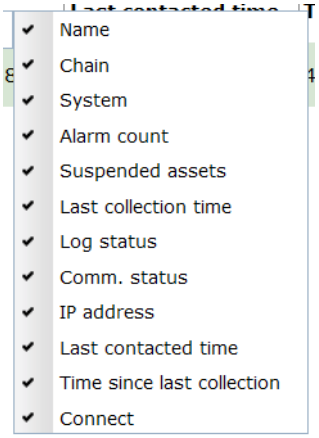
The Site list is a list of complete entries in the AK-EM 800 system and can be filtered according to need as well.

From this list it is possible to do a manual collection of logs.

To start a manual collection of logs, press manage, choose a site and press the ”Collect logs” button.

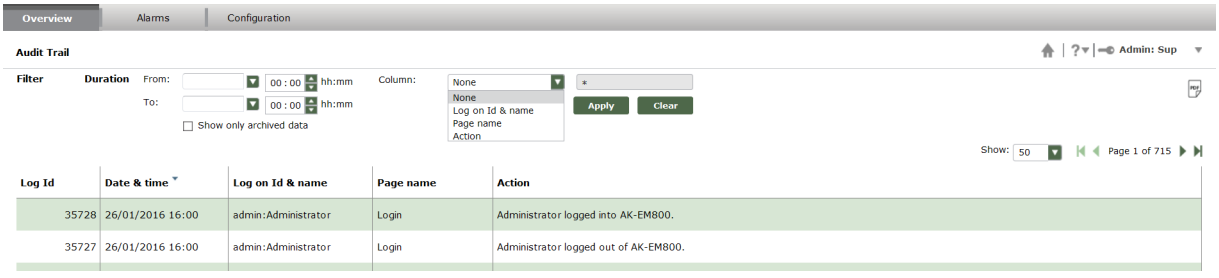


Like in the alarm list also here it is possible to rearange the list by drag & drop the column of press right mouse button on the headline. Press the save setting button to get the same picture on next logon.



Audit Trail

The Audit trail is where all actions made in the AK-EM 800 system is saved.
Audit trail can't be deleted, but archived (see archive section under configuration/system setting)
To show archived data as well, enable the "show archived data" checkbox.
The user can filter on all columns and export the result to PDF

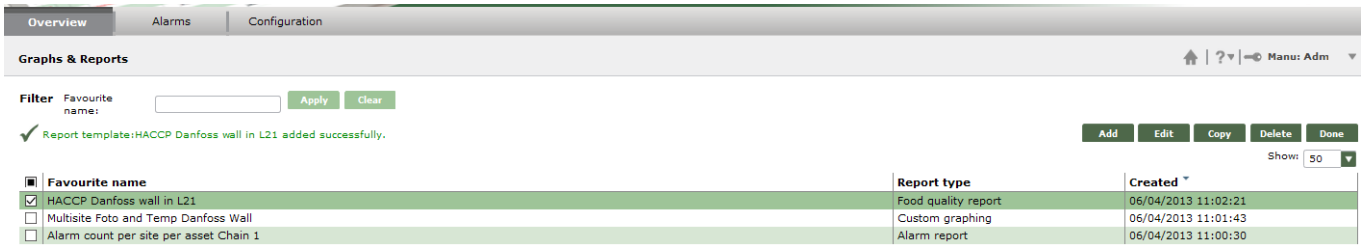


Reports

Select Overview -> General ->Reports

It is possible to present historical data in different ways in the AK-EM 800. This is done in the Graphs & Report function. It is possible to save favourite reports which can be opened for quick access to specific data.

To add a new report type or view data choose the "Add" option.



Any report can be exported to Excel and/or PDF

Alarm Report

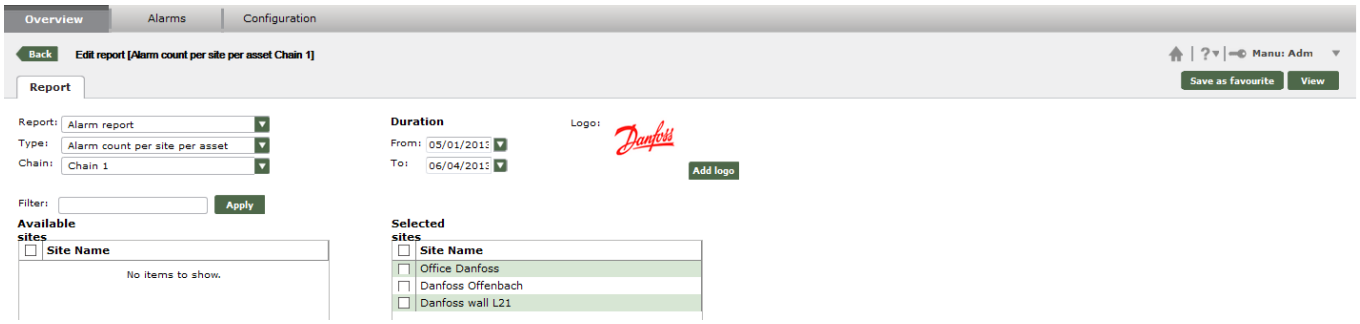
Select report "Alarm report" first.
Afterwards the user can decide between 3 different evaluations:

1. Alarm count per site per asset (shows the asset name and the store name and the alarm count. The one with the most alarm is on top)
2. Alarm count per site (shows site and alarm count presented in a table and a pie chart)
3. Alarm count per reason (shows reason and alarm count presented in a table and a pie chart)

1. Select the chain to make the report for

2. Select the duration for the alarms to be included in the report

3. Select the sites to be included in the report and either save this as a favourite or view to create the report.



The Alarm Report will be opened in a new window, with a list sorted after the amount of alarms received pr. asset from the selected sites within the selected chain.

Alarm count per site per asset

Chain: Danfoss

Duration From: 01/06/2015 To: 15/07/2015

Site name	Asset name	Total alarm co...
Demowall Denmark	0 : Lightsensor	987
Rainer homeoffice SM850	0 : Lightsensor	260
Demowall Denmark	0 : AK-SM8XX	236
Demowall Denmark	0 : 4 : AK CC 550	147
Demowall Denmark	0 : 4 : AK CT550A	131
Rainer homeoffice SM850	0 : AK-SM8XX	123
Demowall Denmark	0 : Temp in wall	93
Danfoss Of Serverraum	0 : AK-SM8XX	45
Rainer homeoffice SM850	0 : Stromzähler	38
Rainer homeoffice SM850	0 : Stromzähler	38
Rainer homeoffice SM850	0 : Stromzähler	36
Rainer homeoffice SM850	0 : 6 : AK-CC750 AA2a	29
Demowall Denmark	0 : 4 : AKCC550-3	27
Demowall Denmark	0 : 4 : AKCC550-2	26
Rainer homeoffice SM850	0 : Lightsensor	24

By double clicking on one of the lines it is possible to see further details for that particular asset

Back **Alarm count per site per asset**

Site name: Demowall Denmark

Chain: Danfoss

Duration From: 01/06/2015 To: 15/07/2015

St...	Ack.	Log Id	Site	Unit ...	Asset	Reason	Type	Active at	Received at	Trip value	Priority	Count	Note	Link
✕	✓	60661	Demowall Denmark	0	0 : Lightsensor	Max.Fühlerwert	M	08/06/2015 10:24	08/06/2015 15:58	1171.1 Lx	Normal	0		
✕	✓	60666	Demowall Denmark	0	0 : Lightsensor	Max.Fühlerwert	M	08/06/2015 10:08	08/06/2015 15:59	1179.7 Lx	Normal	0		
✕	✓	60667	Demowall Denmark	0	0 : Lightsensor	Max.Fühlerwert	M	08/06/2015 09:54	08/06/2015 15:59	1188.3 Lx	Normal	0		
✕	✓	60678	Demowall Denmark	0	0 : Lightsensor	Max.Fühlerwert	M	08/06/2015	08/06/2015	1181.9 Lx	Normal	0		

By double clicking again on one of the alarms, more details can be seen.

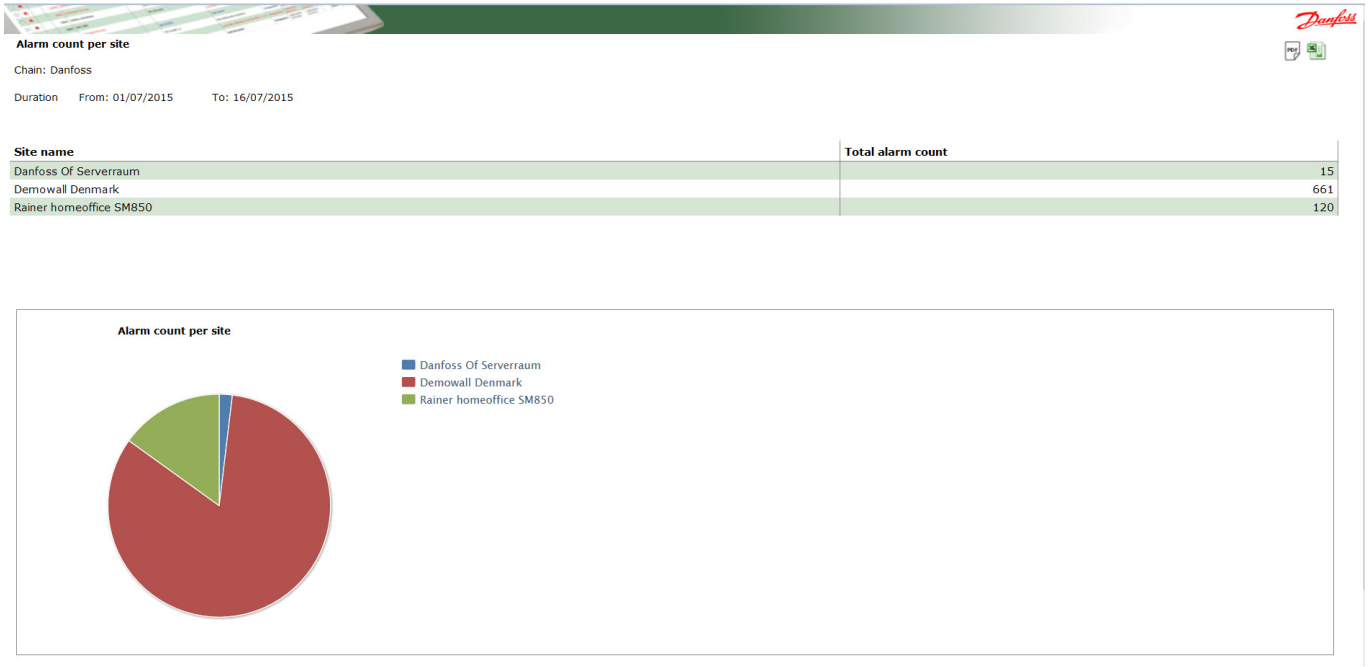
Back **Alarm details[Log Id60661]**

Overview | Actions | Site Contacts

Details

Log Id	60661
Priority	Normal
Type	Miscellaneous
Site	Demowall Denmark
Unit Id	0
Asset	0 : Lightsensor
Reason	Max.Fühlerwert
Count	0
Limit	Alarm wenn > 500.5Lx
Trip value	1171.1 Lx
Active at	08/06/2015 10:24
Received at	08/06/2015 15:58
Cancelled at	08/06/2015 15:26
Active at site	08/06/2015 10:24
Duration	5h:2m
Acknowledged at	08/06/2015 15:58
Action code	Action code 1
Acknowledged by	AK-EM800
Cleared at	08/06/2015 15:26
Cleared by	Demowall Denmark
Routed	Not sent

Alarm count per site



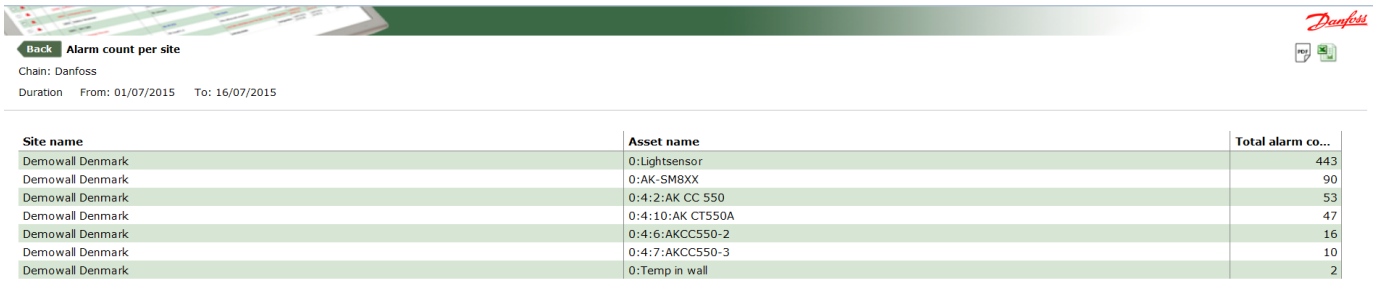
Alarm count per site

Chain: Danfoss

Duration From: 01/07/2015 To: 16/07/2015

Site name	Total alarm count
Danfoss Of Serverraum	15
Demowall Denmark	661
Rainer homeoffice SM850	120

Alarm count per site details (click on pie chart or double click on line)



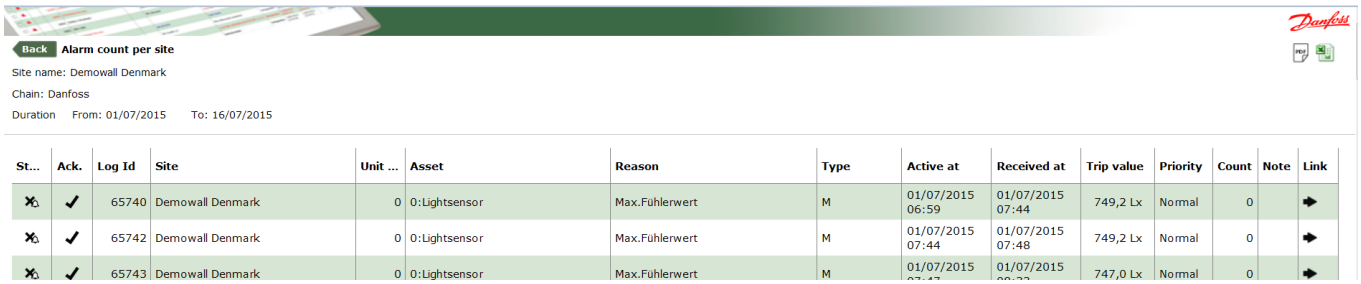
Back **Alarm count per site**

Chain: Danfoss

Duration From: 01/07/2015 To: 16/07/2015

Site name	Asset name	Total alarm co...
Demowall Denmark	0:Lightsensor	443
Demowall Denmark	0:AK-SM8XX	90
Demowall Denmark	0:4:2:AK CC 550	53
Demowall Denmark	0:4:10:AK CT550A	47
Demowall Denmark	0:4:6:AKCC550-2	16
Demowall Denmark	0:4:7:AKCC550-3	10
Demowall Denmark	0:Temp in wall	2

More details by click on the line



Back **Alarm count per site**

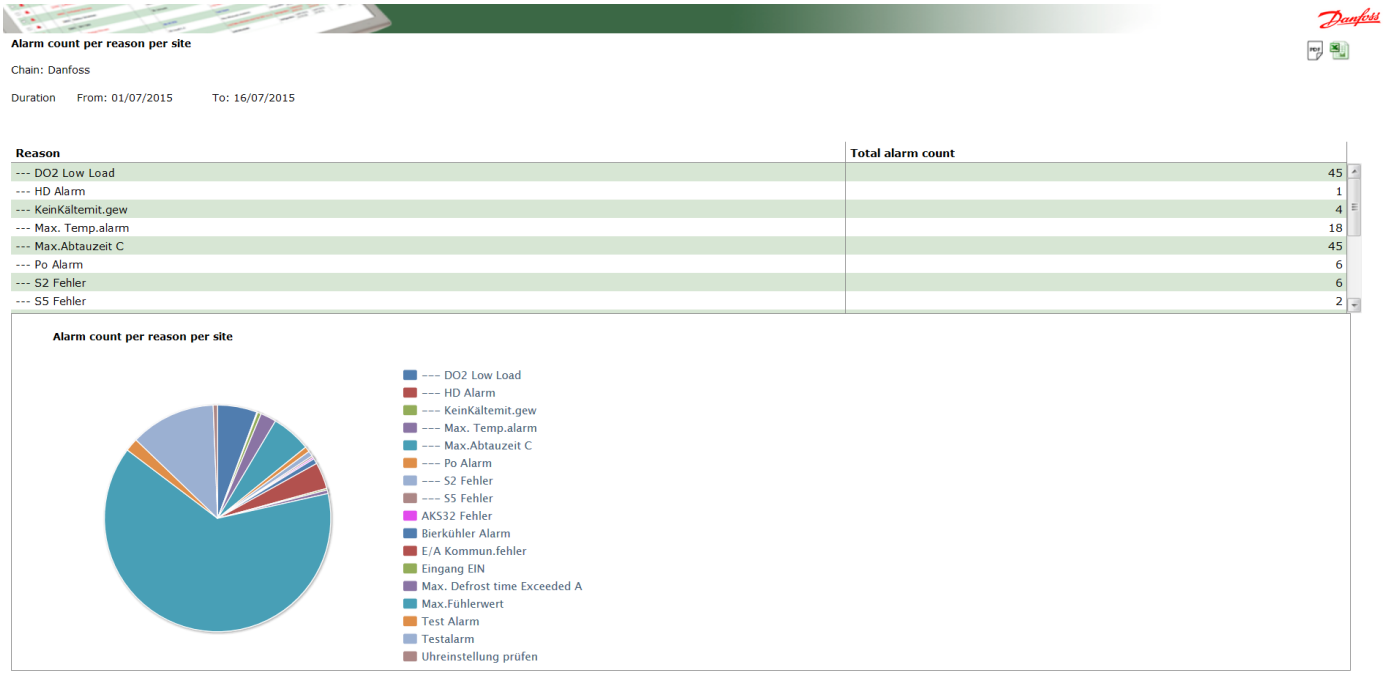
Site name: Demowall Denmark

Chain: Danfoss

Duration From: 01/07/2015 To: 16/07/2015

St...	Ack.	Log Id	Site	Unit ...	Asset	Reason	Type	Active at	Received at	Trip value	Priority	Count	Note	Link
	✓	65740	Demowall Denmark	0	0:Lightsensor	Max.Fühlerwert	M	01/07/2015 06:59	01/07/2015 07:44	749,2 Lx	Normal	0		
	✓	65742	Demowall Denmark	0	0:Lightsensor	Max.Fühlerwert	M	01/07/2015 07:44	01/07/2015 07:48	749,2 Lx	Normal	0		
	✓	65743	Demowall Denmark	0	0:Lightsensor	Max.Fühlerwert	M	01/07/2015	01/07/2015	747,0 Lx	Normal	0		

Alarm count per reason per site



Alarm count per reason per site

Chain: Danfoss

Duration From: 01/07/2015 To: 16/07/2015

Reason	Total alarm count
--- DO2 Low Load	45
--- HD Alarm	1
--- KeinKältemit.gew	4
--- Max. Temp.alarm	18
--- Max.Abtauzeit C	45
--- Po Alarm	6
--- S2 Fehler	6
--- S5 Fehler	2

Alarm count per reason per site

Alarm count per reason details (click on pie chart or double click on line)

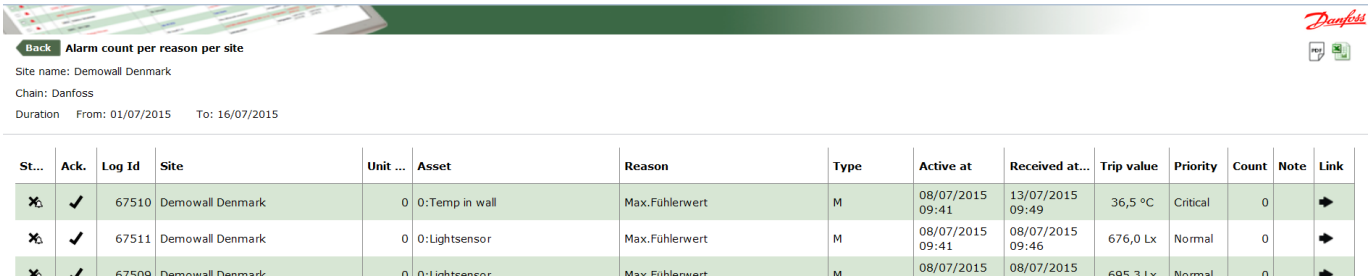
Back **Alarm count per reason per site**

Chain: Danfoss

Duration From: 01/07/2015 To: 16/07/2015

Site name	Total alarm count
Rainer homeoffice SM850	63
Demowall Denmark	445

More details by click on the line



Back **Alarm count per reason per site**

Site name: Demowall Denmark

Chain: Danfoss

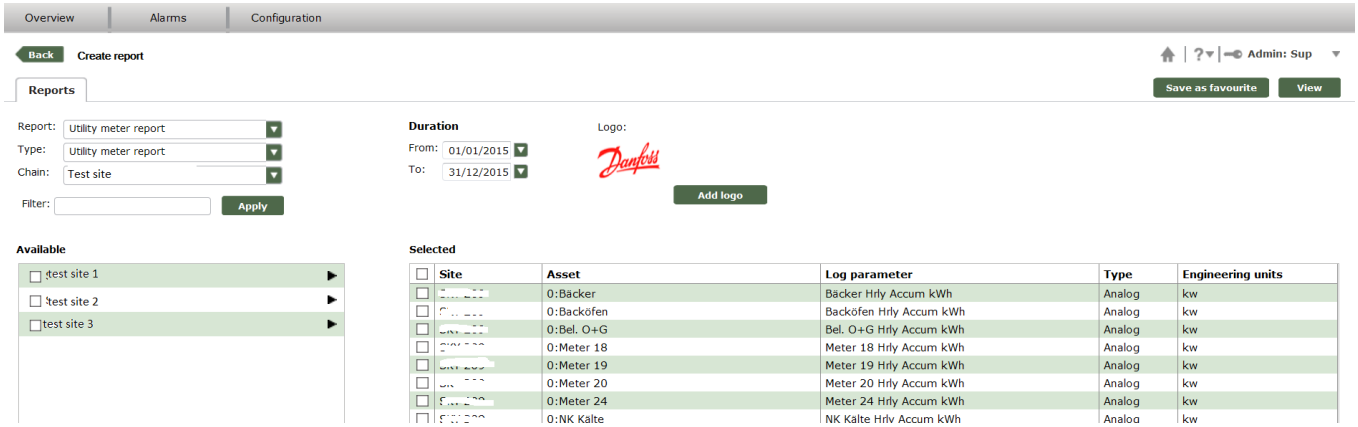
Duration From: 01/07/2015 To: 16/07/2015

St...	Ack.	Log Id	Site	Unit ...	Asset	Reason	Type	Active at	Received at...	Trip value	Priority	Count	Note	Link
✓	✓	67510	Demowall Denmark	0	0:Temp in wall	Max.Fühlerwert	M	08/07/2015 09:41	13/07/2015 09:49	36,5 °C	Critical	0		
✓	✓	67511	Demowall Denmark	0	0:Lightsensor	Max.Fühlerwert	M	08/07/2015 09:41	08/07/2015 09:46	676,0 Lx	Normal	0		
✓	✓	67509	Demowall Denmark	0	0:Lightsensor	Max.Fühlerwert	M	08/07/2015	08/07/2015	695,3 Lx	Normal	0		

Utility meter

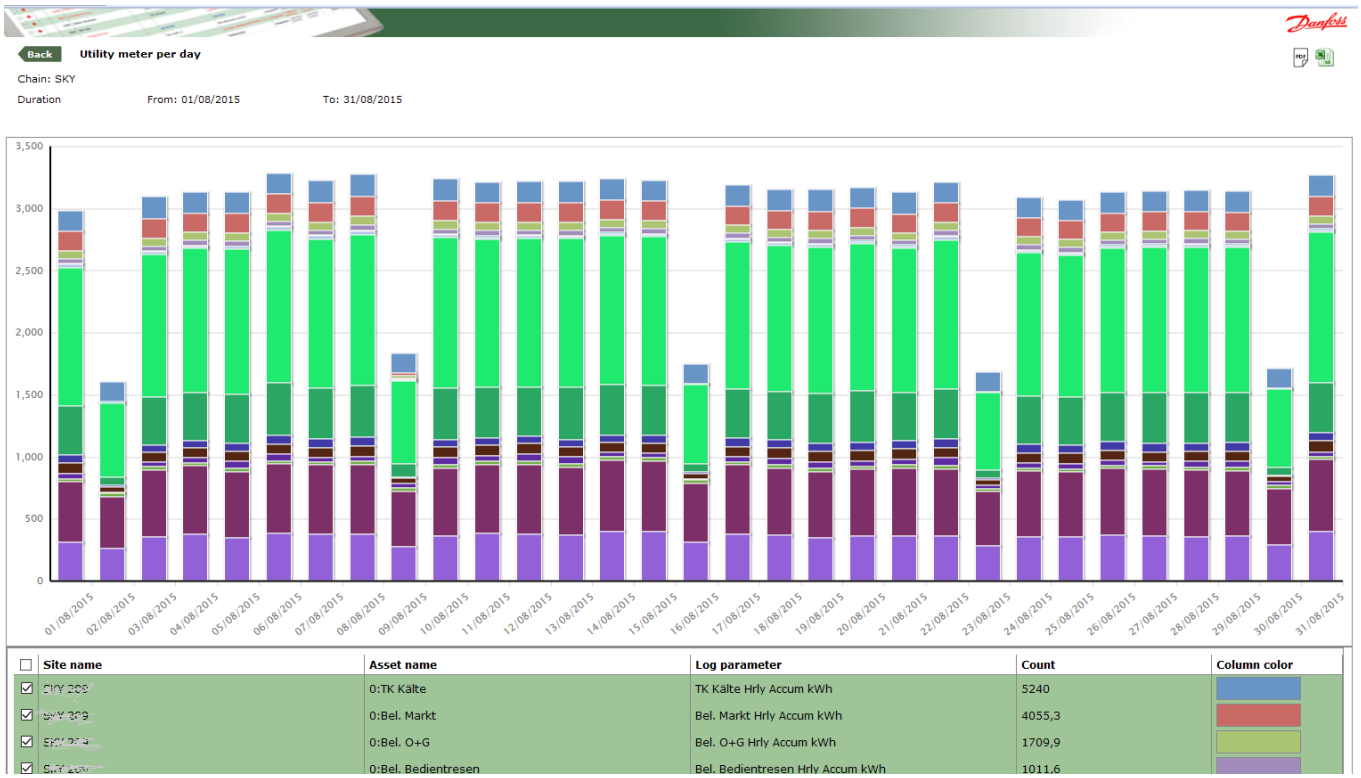
This report is not available for AKM sites.
Select Overview -> Reports -> Utility meter

To present collected log data as bar chart select "Utility meter" as report and type
1. Select the chain to make the report for
2. Select the utility meter(s)
3. Select the time frame (e.g. a year)



Press view and all selected utility meters are presented with monthly values. The legend below show also the consumption for the selected period.

A click on one of the bar graphs drills down into a daily view



Site name	Asset name	Log parameter	Count	Column color
[illegible]	0:TK Kälte	TK Kälte Hrly Accum kWh	5240	
[illegible]	0:Bel. Markt	Bel. Markt Hrly Accum kWh	4055,3	
[illegible]	0:Bel. O+G	Bel. O+G Hrly Accum kWh	1709,9	
[illegible]	0:Bel. Bedientresen	Bel. Bedientresen Hrly Accum kWh	1011,6	

Position the mouse over a field to get the details.

The report can be exported to Excel and also as a PDF.

Graphs

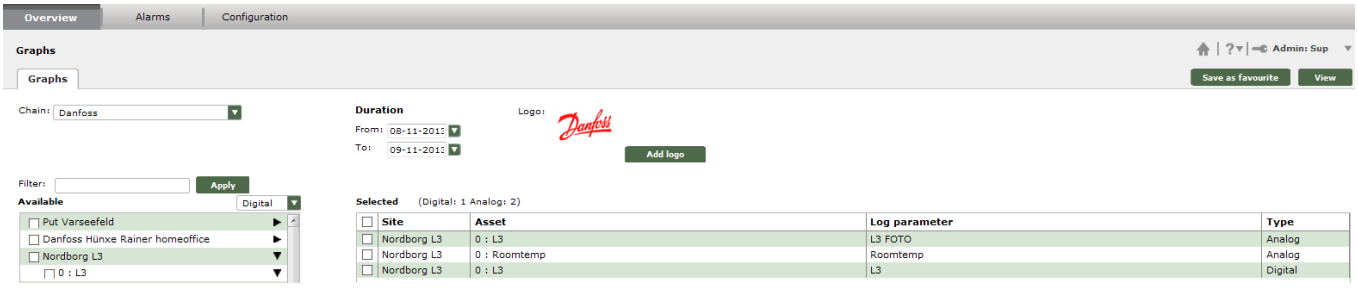
"Select Overview -> Graphs"

To present collected log data as a curve select ”Custom Graphing” as Report type

1. Select the chain to make the report for

2. Select from when the curve should be drawn

3. Select the parameters to be included in the report and either save this as a favourite or view to create the report.

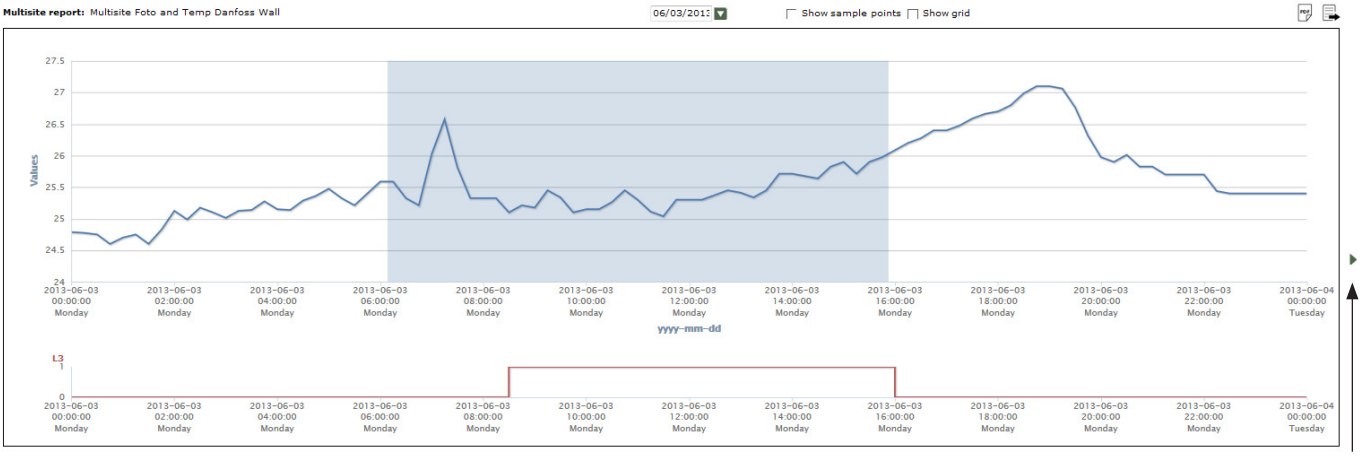


A curve will be drawn where the Y-axis is scaled according to the max. and min. values for the selected parameters

It is possible to select or deselect the parameters to be drawn. If Min. and Max. values are changed the graph will automatically be scaled.
Dependent on values a dual axis graph will be presented automatically.

Site	Asset	Log parameter	Legend	Interval	Min	Max	Average
Nordborg L3	0 : Roomtemp	Roomtemp		60 Sec	22.78	24.14	23.36
Nordborg L3	0 : L3	L3		60 Sec	0	1	0.55
Nordborg L3	0 : L3	L3 FOTO		60 Sec	12.89	365.94	111.71

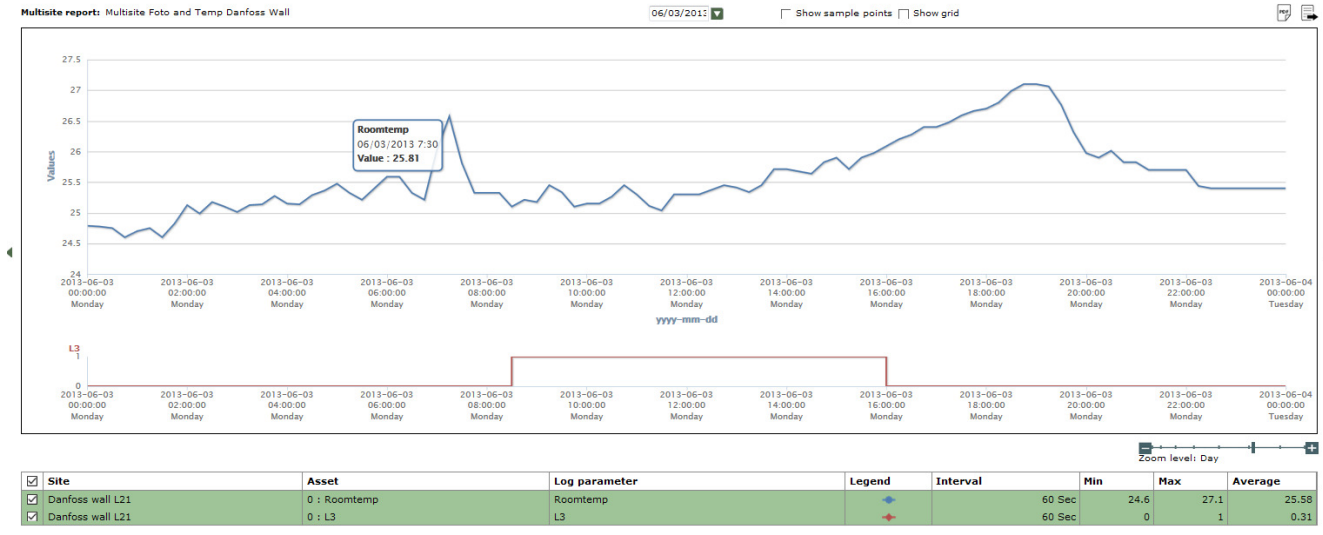
It is possible to Zoom into a specific area by clicking on the graph and drag the mouse to mark the area to Zoom into.



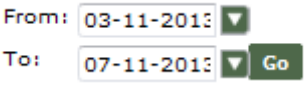
To move to the previous or next period for the selected Zoom level the arrows to either sides can be used.

Or the Zoom level can be used to zoom into a predefined period.

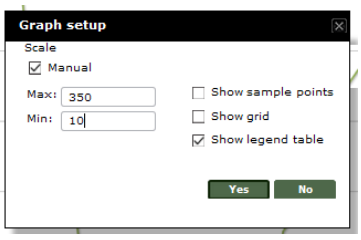
If a digital parameter is selected it will be drawn just below the analog curve, with a different scale.



The duration of the graph can be changed.



The scale of the graph can be changed. Press the button "Graph setup"

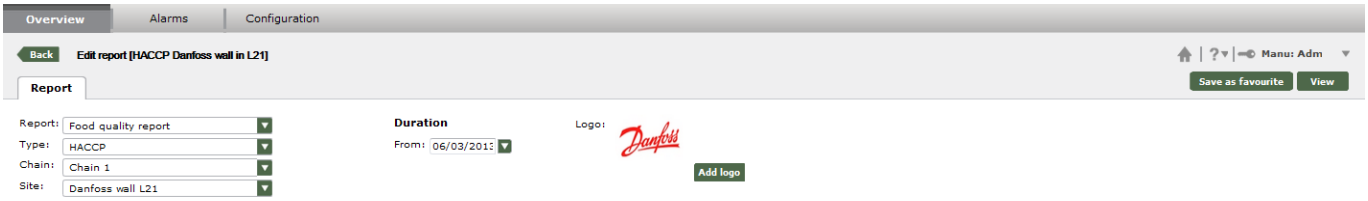


HACCP Report

The HACCP Report can only be made if the Food type association and HACCP Configuration has already been done.

1. Select the site to make the report for

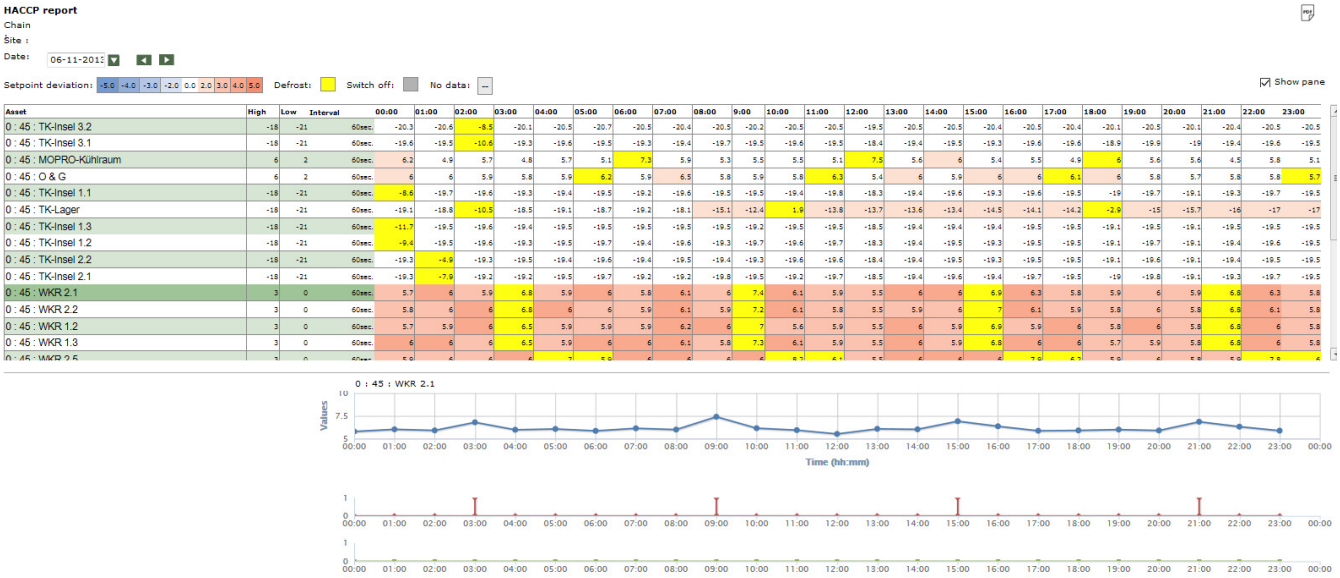
2. Select the day to make the HACCP report for and either save this as a favourite or view to create the report.



The HACCP Report will be opened in a new window, with a list of all the configured parameters.

1. To see more details press the Show Pane option

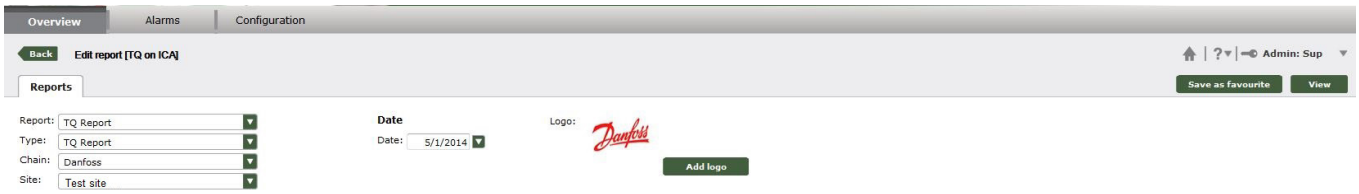
2. When a parameter is chosen the curves for it will be present just below.



TQ (Temperature Quality) report

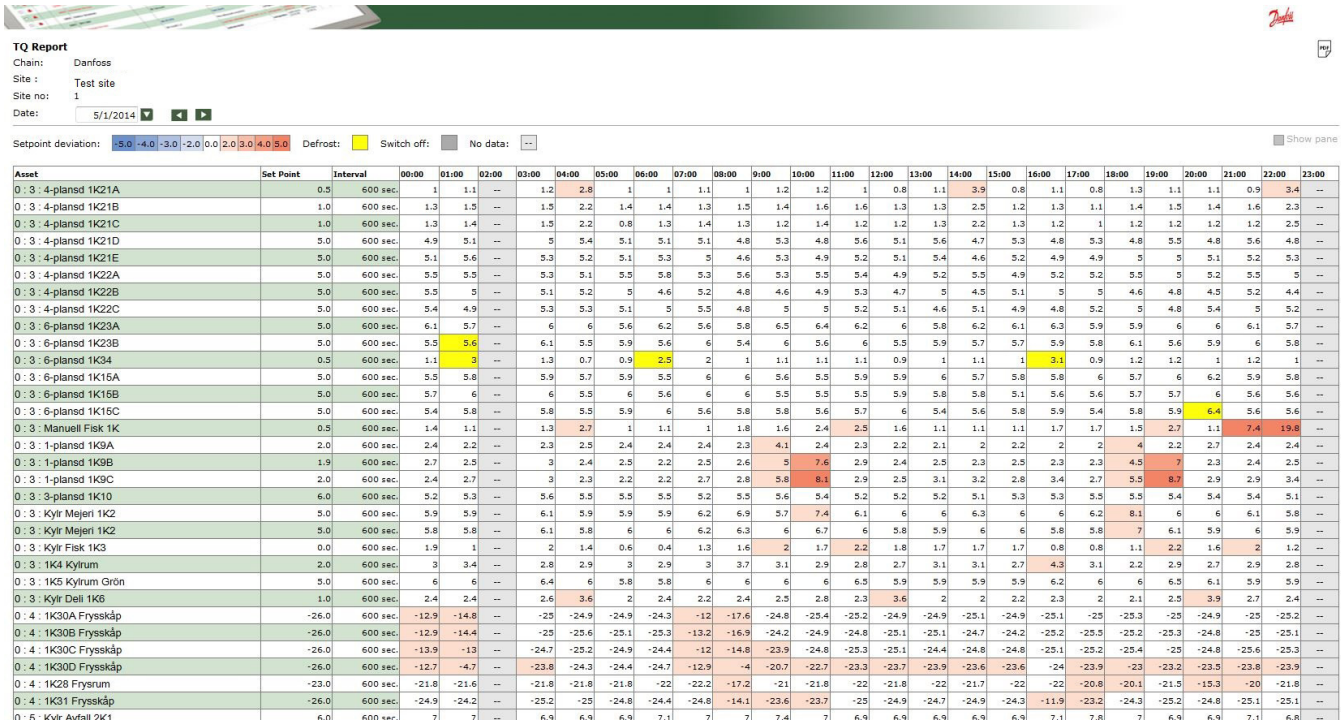
The TQ Report can only be made if the Report configuration (see site configuration) has already been done. In difference to the HACCP report, the TQ report will take the set point and not the food type as reference to present the colors.

1. Select the site to make the report for
2. Select the day to make the TQ report for and either save this as a favorite or view to create the report



The TQ Report will be opened in a new window (or dependent on your browser setting in a new tab), with a list of all the configured parameters.

1. To see more details press the Show Pane option
2. When a parameter is chosen the curves for it will be present just below.



TQ Report

Chain: Danfoss
Site : Test site
Site no: 1
Date: 5/1/2014

Setpoint deviation: -5.0 -4.0 -3.0 -2.0 0.0 2.0 3.0 4.0 5.0 Defrost: Switch off: No data: --

Show pane

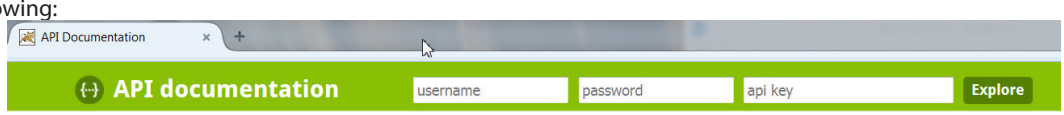
Asset	Set Point	Interval	00:00	01:00	02:00	03:00	04:00	05:00	06:00	07:00	08:00	09:00	10:00	11:00	12:00	13:00	14:00	15:00	16:00	17:00	18:00	19:00	20:00	21:00	22:00	23:00
0 : 3 : 4-plansd 1K21A	0.5	600 sec.	1	1.1	--	1.2	2.8	1	1	1.1	1	1.2	1.2	1	0.8	1.1	3.9	0.8	1.1	0.8	1.3	1.1	1.1	0.9	3.4	--
0 : 3 : 4-plansd 1K21B	1.0	600 sec.	1.3	1.5	--	1.5	2.2	1.4	1.4	1.3	1.5	1.4	1.6	1.6	1.3	1.3	2.5	1.2	1.3	1.1	1.4	1.5	1.4	1.6	2.3	--
0 : 3 : 4-plansd 1K21C	1.0	600 sec.	1.3	1.4	--	1.5	2.2	0.8	1.3	1.4	1.3	1.2	1.4	1.2	1.2	1.3	2.2	1.3	1.2	1	1.2	1.2	1.2	1.2	2.5	--
0 : 3 : 4-plansd 1K21D	5.0	600 sec.	4.9	5.1	--	5	5.4	5.1	5.1	5.1	4.8	5.3	4.8	5.6	5.1	5.6	4.7	5.3	4.8	5.3	4.8	5.5	4.8	5.6	4.8	--
0 : 3 : 4-plansd 1K21E	5.0	600 sec.	5.1	5.6	--	5.3	5.2	5.1	5.3	5	4.6	5.3	4.9	5.2	5.1	5.4	4.6	5.2	4.9	4.9	5	5	5.1	5.2	5.3	--
0 : 3 : 4-plansd 1K22A	5.0	600 sec.	5.5	5.5	--	5.3	5.1	5.5	5.8	5.3	5.6	5.3	5.5	5.4	4.9	5.2	5.5	4.9	5.2	5.2	5.5	5	5.2	5.5	5	--
0 : 3 : 4-plansd 1K22B	5.0	600 sec.	5.5	5	--	5.1	5.2	5	4.6	5.2	4.8	4.6	4.9	5.3	4.7	5	4.5	5.1	5	5	4.6	4.8	4.5	5.2	4.4	--
0 : 3 : 4-plansd 1K22C	5.0	600 sec.	5.4	4.9	--	5.3	5.3	5.1	5	5.5	4.8	5	5	5.2	5.1	4.6	5.1	4.9	4.8	5.2	5	4.8	5.4	5	5.2	--
0 : 3 : 6-plansd 1K23A	5.0	600 sec.	6.1	5.7	--	6	6	5.6	6.2	5.6	5.8	6.5	6.4	6.2	6	5.8	6.2	6.1	6.3	5.9	5.9	6	6	6.1	5.7	--
0 : 3 : 6-plansd 1K23B	5.0	600 sec.	5.5	5.6	--	6.1	5.5	5.9	5.6	6	5.4	6	5.6	6	5.5	5.9	5.7	5.7	5.9	5.8	6.1	5.6	5.9	6	5.8	--
0 : 3 : 6-plansd 1K34	0.5	600 sec.	1.1	3	--	1.3	0.7	0.9	2.5	2	1	1.1	1.1	1.1	0.9	1	1.1	1	3.1	0.9	1.2	1.2	1	1.2	1	--
0 : 3 : 6-plansd 1K15A	5.0	600 sec.	5.5	5.8	--	5.9	5.7	5.9	5.5	6	6	5.6	5.5	5.9	5.9	6	5.7	5.8	5.8	6	5.7	6	6.2	5.9	5.8	--
0 : 3 : 6-plansd 1K15B	5.0	600 sec.	5.7	6	--	6	5.5	6	5.6	6	6	5.5	5.5	5.5	5.9	5.8	5.8	5.1	5.6	5.6	5.7	5.7	6	5.6	5.6	--
0 : 3 : 6-plansd 1K15C	5.0	600 sec.	5.4	5.8	--	5.8	5.5	5.9	6	5.6	5.8	5.8	5.6	5.7	6	5.4	5.6	5.8	5.9	5.4	5.8	5.9	6.4	5.6	5.6	--
0 : 3 : Manuell Fisk 1K	0.5	600 sec.	1.4	1.1	--	1.3	2.7	1	1.1	1	1.8	1.6	2.4	2.5	1.6	1.1	1.1	1.1	1.7	1.7	1.5	2.7	1.1	7.4	19.8	--
0 : 3 : 1-plansd 1K9A	2.0	600 sec.	2.4	2.2	--	2.3	2.5	2.4	2.4	2.4	2.3	4.1	2.4	2.3	2.2	2.1	2	2.2	2	2	4	2.2	2.7	2.4	2.4	--
0 : 3 : 1-plansd 1K9B	1.9	600 sec.	2.7	2.5	--	3	2.4	2.5	2.2	2.5	2.6	5	7.6	2.9	2.4	2.5	2.3	2.5	2.3	2.3	4.5	7	2.3	2.4	2.5	--
0 : 3 : 1-plansd 1K9C	2.0	600 sec.	2.4	2.7	--	3	2.3	2.2	2.2	2.7	2.8	5.8	8.1	2.9	2.5	3.1	3.2	2.8	3.4	2.7	5.5	8.7	2.9	2.9	3.4	--
0 : 3 : 3-plansd 1K10	6.0	600 sec.	5.2	5.3	--	5.6	5.5	5.5	5.5	5.2	5.5	5.6	5.4	5.2	5.2	5.2	5.1	5.3	5.3	5.5	5.5	5.4	5.4	5.4	5.1	--
0 : 3 : Kylr Mejeri 1K2	5.0	600 sec.	5.9	5.9	--	6.1	5.9	5.9	5.9	6.2	6.9	5.7	7.4	6.1	6	6	6.3	6	6	6.2	8.1	6	6	6.1	5.8	--
0 : 3 : Kylr Mejeri 1K2	5.0	600 sec.	5.8	5.8	--	6.1	5.8	6	6	6.2	6.3	6	6.7	6	5.8	5.9	6	6	5.8	5.8	7	6.1	5.9	6	5.9	--
0 : 3 : Kylr Fisk 1K3	0.0	600 sec.	1.9	1	--	2	1.4	0.6	0.4	1.3	1.6	2	1.7	2.2	1.8	1.7	1.7	1.7	0.8	0.8	1.1	2.2	1.6	2	1.2	--
0 : 3 : 1K4 Kylrum	2.0	600 sec.	3	3.4	--	2.8	2.9	3	2.9	3	3.7	3.1	2.9	2.8	2.7	3.1	3.1	2.7	4.3	3.1	2.2	2.9	2.7	2.9	2.8	--
0 : 3 : 1K5 Kylrum Grön	5.0	600 sec.	6	6	--	6.4	6	5.8	5.8	6	6	6	6	6.5	5.9	5.9	5.9	5.9	6.2	6	6	6.5	6.1	5.9	5.9	--
0 : 3 : Kylr Deli 1K6	1.0	600 sec.	2.4	2.4	--	2.6	3.6	2	2.4	2.2	2.4	2.5	2.8	2.3	3.6	2	2	2.2	2.3	2	2.1	2.5	3.9	2.7	2.4	--
0 : 4 : 1K30A Frysskåp	-26.0	600 sec.	-12.9	-14.8	--	-25	-24.9	-24.9	-24.3	-12	-17.6	-24.8	-25.4	-25.2	-24.9	-24.9	-25.1	-24.9	-25.1	-25	-25.3	-25	-24.9	-25	-25.2	--
0 : 4 : 1K30B Frysskåp	-26.0	600 sec.	-12.9	-14.4	--	-25	-25.6	-25.1	-25.3	-13.2	-16.9	-24.2	-24.9	-24.8	-25.1	-25.1	-24.7	-24.2	-25.2	-25.5	-25.2	-25.3	-24.8	-25	-25.1	--
0 : 4 : 1K30C Frysskåp	-26.0	600 sec.	-13.9	-13	--	-24.7	-25.2	-24.9	-24.4	-12	-14.8	-23.9	-24.8	-25.3	-25.1	-24.4	-24.8	-24.8	-25.1	-25.2	-25.4	-25	-24.8	-25.6	-25.3	--
0 : 4 : 1K30D Frysskåp	-26.0	600 sec.	-12.7	-4.7	--	-23.8	-24.3	-24.4	-24.7	-12.9	-4	-20.7	-22.7	-23.3	-23.7	-23.9	-23.6	-23.6	-24	-23.9	-23	-23.2	-23.5	-23.8	-23.9	--
0 : 4 : 1K28 Frysrum	-23.0	600 sec.	-21.8	-21.6	--	-21.8	-21.8	-21.8	-22	-22.2	-17.2	-21	-21.8	-22	-21.8	-22	-21.7	-22	-22	-20.8	-20.1	-21.5	-15.3	-20	-21.8	--
0 : 4 : 1K31 Frysskåp	-26.0	600 sec.	-24.9	-24.2	--	-25.2	-25	-24.8	-24.4	-24.8	-14.1	-23.6	-23.7	-25	-24.9	-24.7	-24.9	-24.3	-11.9	-23.2	-24.3	-25.2	-24.8	-25.1	-25.1	--
0 : 5 : Kylr Avfall 2K1	6.0	600 sec.	7	7	--	6.9	6.9	6.9	7.1	7	7	7.4	7	6.9	6.9	6.9	6.9	6.9	7.1	7.8	7	6.9	6.9	7.1	6.8	--

Webservice with API

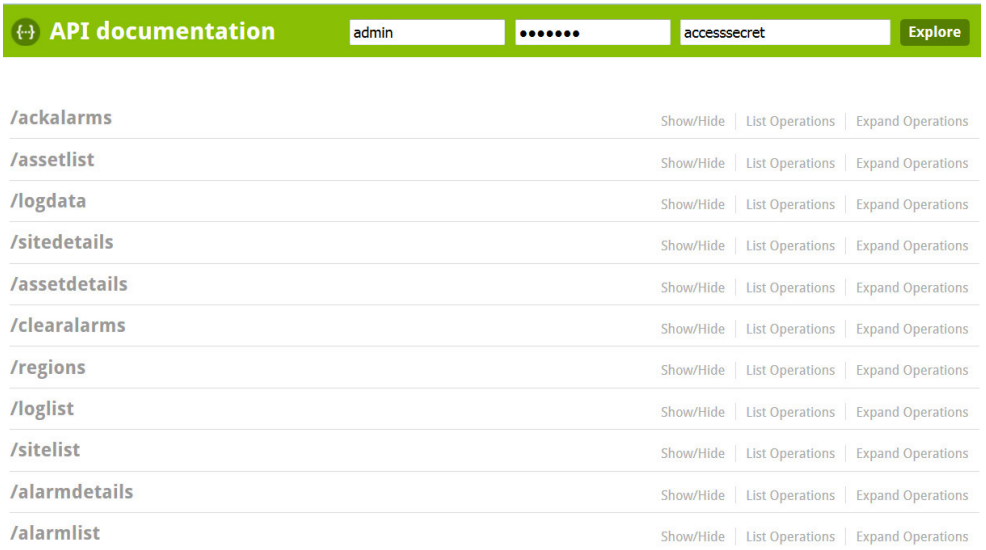
AK-EM 800 is able to exchange data with other systems.
If this is needed the customer has to order an extra license called Webservice. AK-EM 800 is using API's (application programming interface) to allow the user to get data out of the AK-EM 800 database.

The documentation is embedded in the AK-EM 800 itself.
Instead of using the link to AK-EM800 like http://localhost:8080/AK_EM800 (localhost is here only a placeholder if AK_EM 800 it called on the machine where it's installed) use following link. http://localhost:8080/mws.

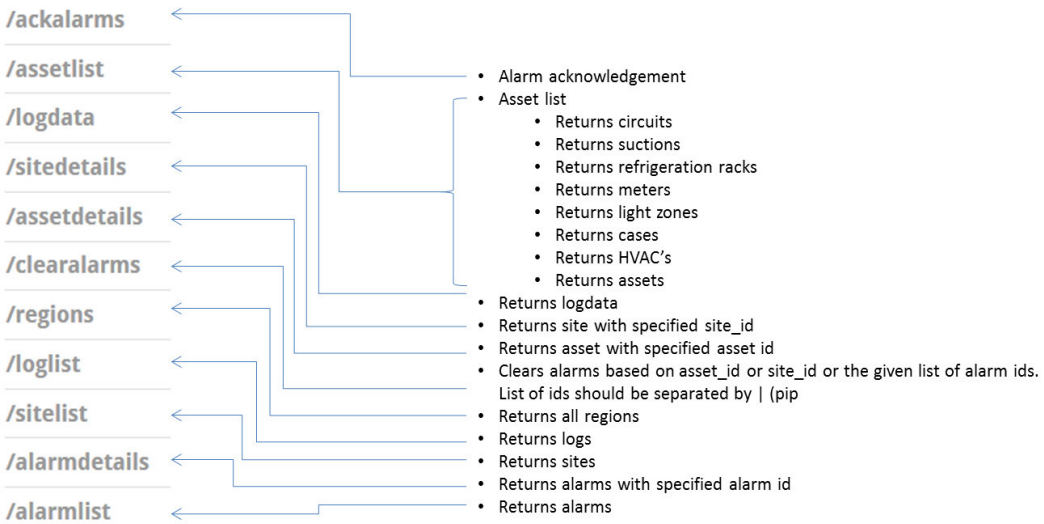
The browser should show following:



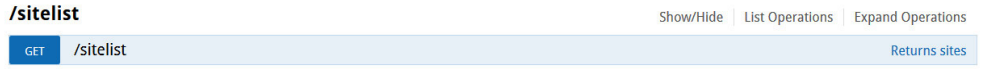
A user can in his user group associated to be part of Webservices.
Type in username, password and as API key "accesssecret" to get following screen.



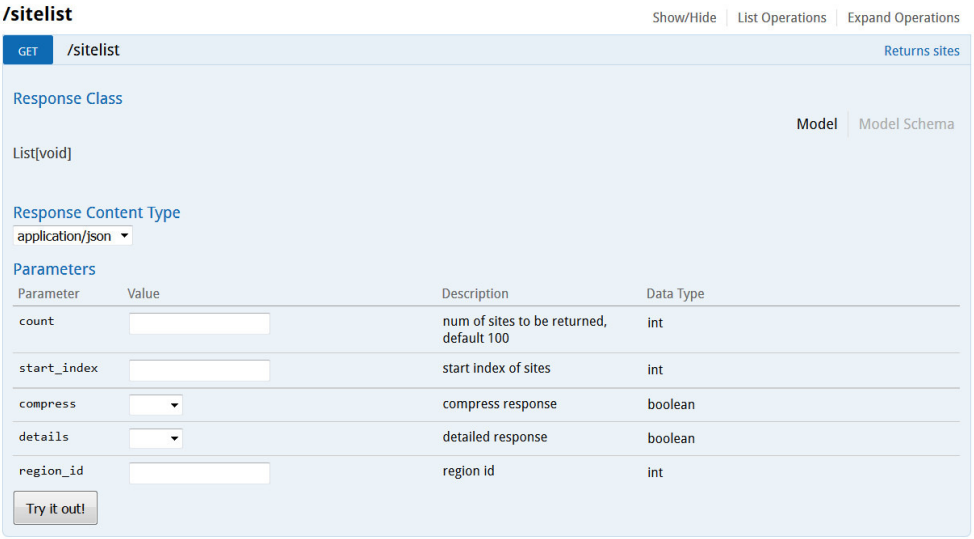
The listed lines are displaying the commands, which are available today.



The documentation allows also to test commands. Click on one of the commands (e.g. on /sitelist). A new line will be visible.



Click on get, to see more details.



Now click on the button "Try it out" to get the results of this command.

This works for all commands. In some of them are mandatory fields which have to be filled in. The needed information needs to be copied from another command.
E.g. the site Id in the picture above is needed in other commands to get alarms from a particular site.

The following table shows, how to order the additional license.

Sites	Order no.
1	080Z4107
50	080Z4108
250	080Z4109
500	080Z4110

Appendix

Time zone settings

Time zone handling at AK-EM 800	Option selected by the user		
	UTC	**User Local Time** (will be detected via Browser)	**Site Local Time**
Database handling	UTC	UTC	UTC
Site List	UTC	User Local	Site Local
Audit Trail	UTC	User Local	EM800 Local
Graph and Reports Template creation date	UTC	User Local	EM800 Local
Graph/HACCP view	Site Local	Site Local	Site Local
Alarm List			
Alarms from sites	UTC	User Local	Site Local
AK-EM 800 System alarms that do not belong to any site	UTC	User Local	EM800 Local
Suspended Site/Assets	Site Local	Site Local	Site Local
Destinations	--	--	--
System Settings	--	--	--
Alarm Routes/ Email routing	Site Local	Site Local	Site Local
System Alarms	--	--	--
Users	--	--	--
Contractors	--	--	--
Site	--	--	--
Chain	--	--	--
Export to XML	UTC	UTC	UTC
Export to PDF	The timestamp appearing on Export will be same as the time stamp user is viewing on AK-EM 800.		

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