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EMC 5.x-Software Manual

Energy Management

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Introduction

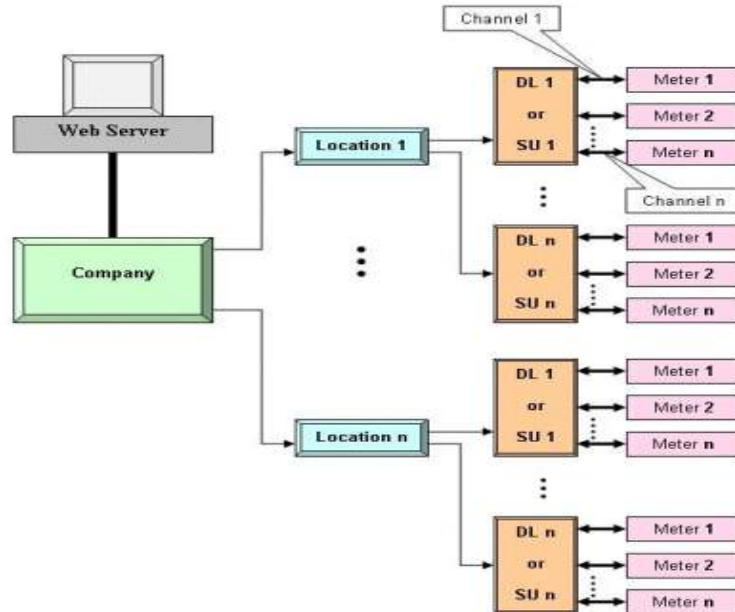
With the Energy management Control (EMC) we have made software which supports analysis of your energy consumption and allows you to optimize your energy consumption.

Data from the meter (e.g. electricity meters, water-meter) are intermediately stored in devices. EMC reads these devices independently and stores the data for analysis and provides the results in a web based interface. The results are represented in simple and understandable form and can be

- A) Shown on a PC
- B) Shown on an intranet (company network)
- C) shown worldwide over the internet

The unique architecture of EMC offers even a worldwide service at which a Provider authorized for this, selects from the data loggers and provides on protected web sites for the customers the energy consumption. The customer needs no software installations in this case and accesses his consumption information from a Web browser (e.g. Internet Explorer).

With EMC you can bring your energy consumption information together from several locations. The number of the locations and data logger isn't restricted. The program also can be adapted to new devices any time. Following is a graphic which shows the resemble every single component in the following:



Minimum System Requirements

Server Workstation

Hardware:

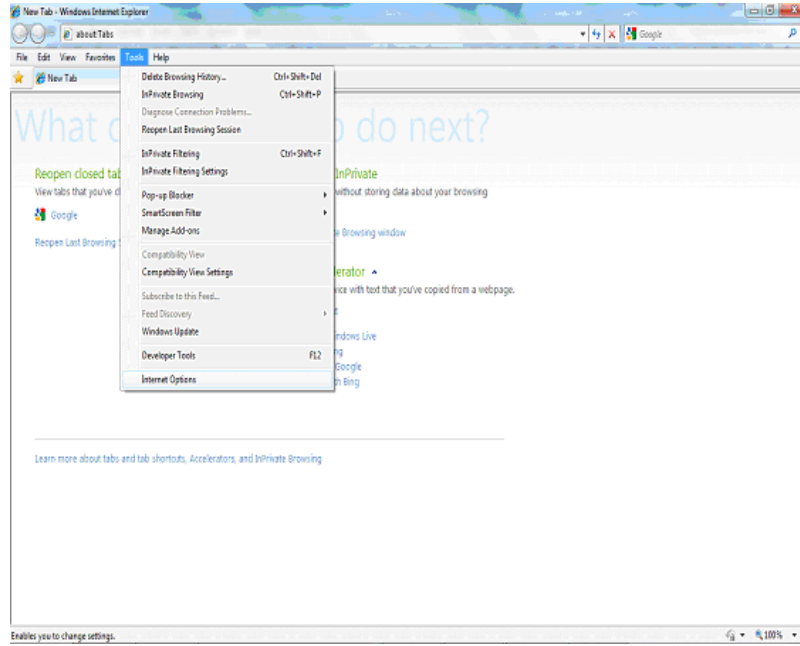
Dual Core or Higher
2GB RAM
10GB free on hard disk

Software:

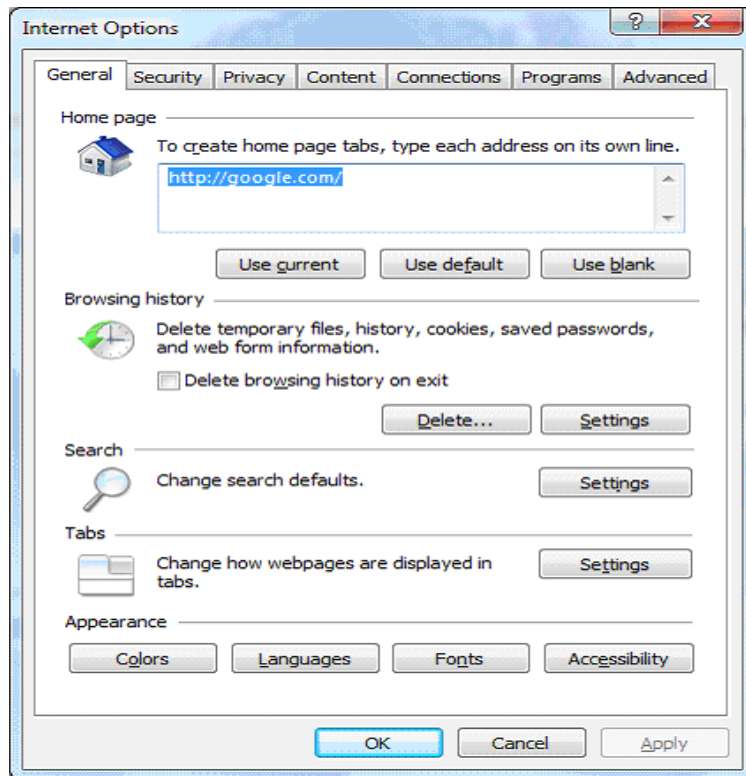
Windows7 32bit or 64bit
Internet Explorer 8 or 9 or Mozilla Fire Fox
j2sdk 1.6.0 or Higher
MySQL 5.1.44 or Higher
Tomcat 5.0.19 or Higher

Browser Settings

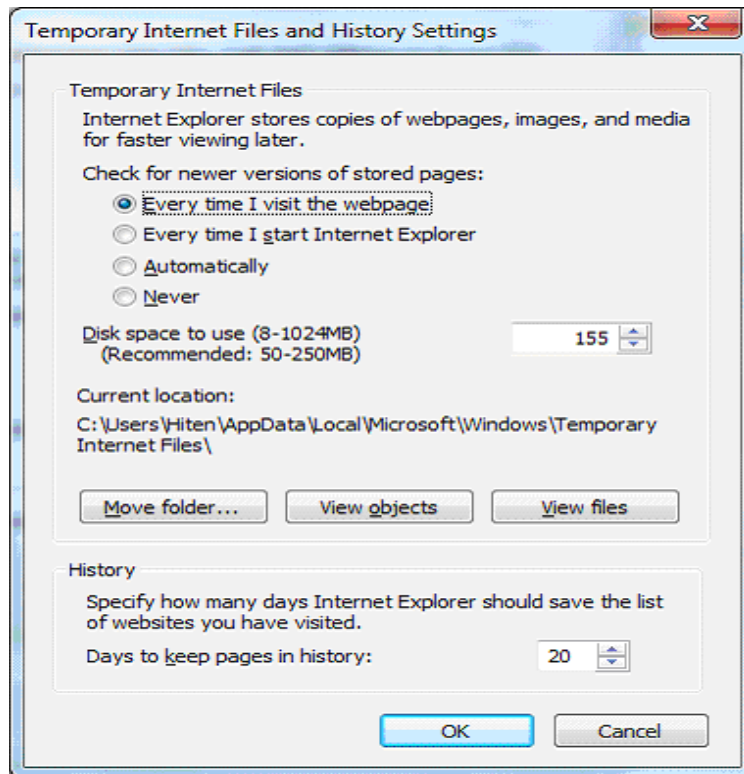
1. Select Tool -> Internet Options



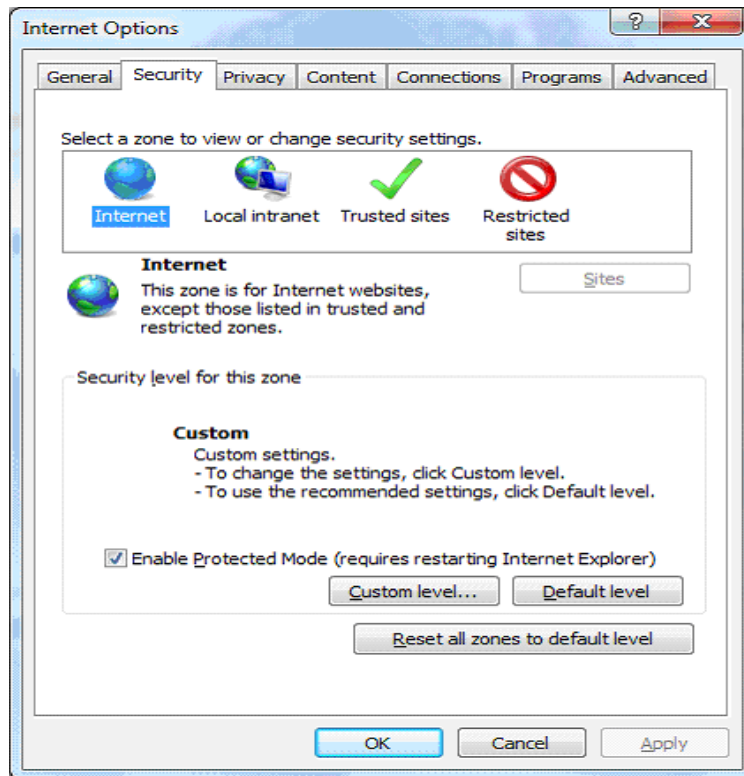
2. It will open below pop-up window.



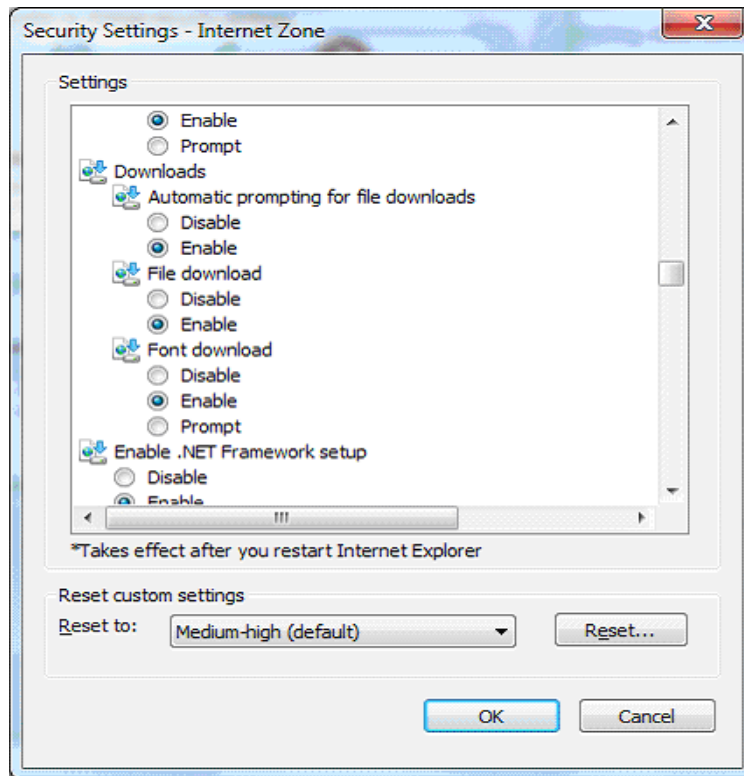
3. Click on Browser History Settings. It will open below pop-up window.
 - Select option Every time I visit the webpage.
 - Click on OK to confirm



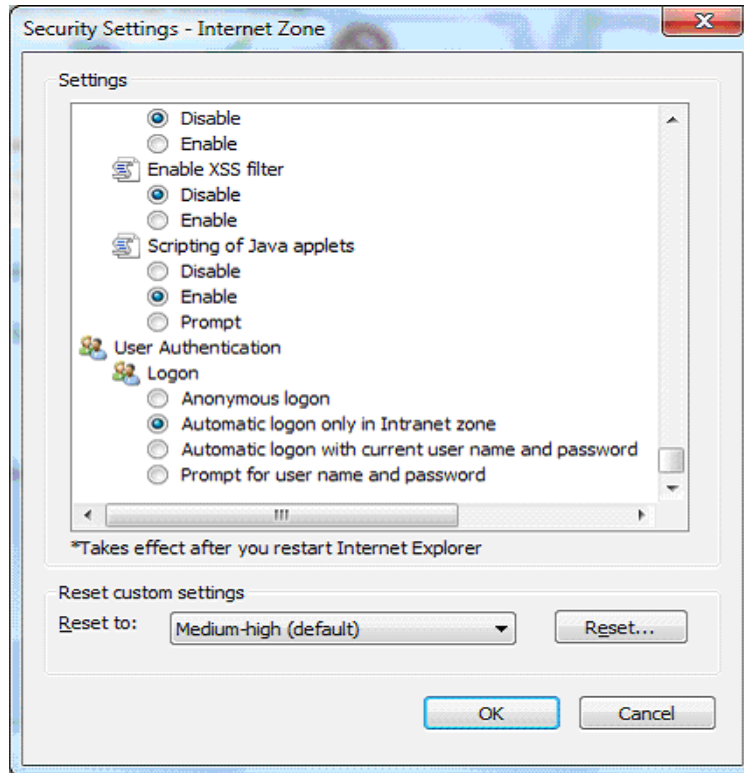
4. Select Security tab on pop-up window as shown below.



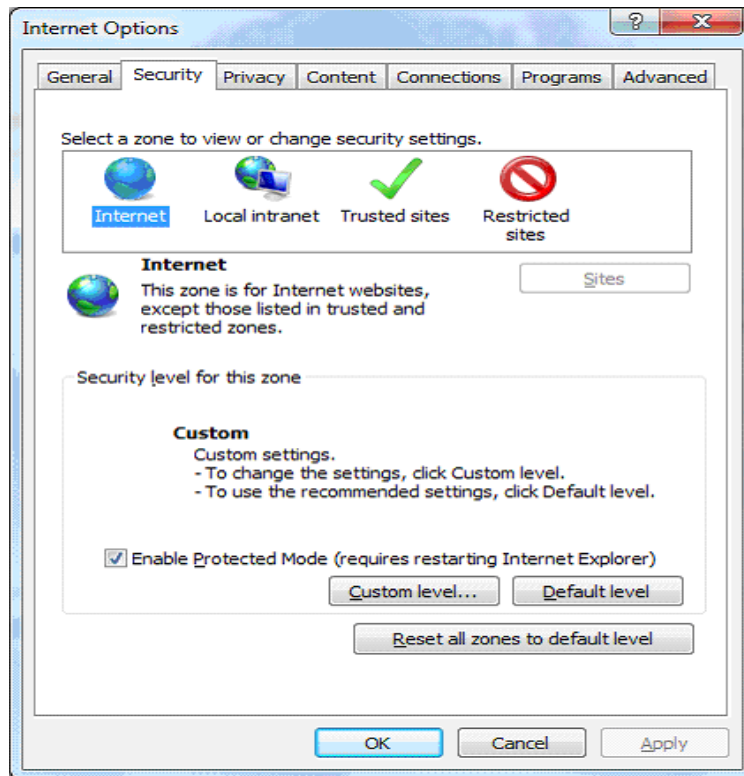
5. Select Custom level.. option. It will open pop-up as shown below.
Find out Downloads section .
1) Select 'Enable' option for Automatic prompting for file Downloads .
2) Select 'Enable' option for File download



- 3) Scroll down to end, and select 'Disable' option in Enable XSS filter.
- 4) Click on OK to confirm.



6. Click on OK to confirm.



CONSORTIUM

EMC can be used as a business and release version of a consortium of several independent companies (activation of the license file). The consortium is the generic term for all companies.

Name and address of the consortium's data comes from the license file and can not be changed by the user.

The color setting for the graphics, the general definition of the read-out times can be specified once. They are inherited by all sub-companies and data logger. However, you can individually be changed there.

emc Consortium - Detail 29-08-2012 10:09:59

Short Name* : Camille B AG
Consortium Name* : GMC-Germany
Street : Aargauerstrassè 7
Country-Zip-Town : CH 5610 Wohlen
Country : Schweiz
Contact Person : as
Email : a3c@ymail.com
Telephone No. : 141515151
Fax No. : 141515151
Graphic Colors : Tariff1 Tariff2 Tariff3 Tariff4
Tariff5 Tariff6 Tariff7 Tariff8
Tariff9 Tariff10 Tariff11 Tariff12
Schedule : @ 00:15

Level: 1 Modified By - emc, 21-08-2012 11:28:08

Properties :

Short Name :	Short name that is used in EMC. (30characters)
Picture :	Here a picture of the consortium will be displayed. Image can be select using browse button (JPG, GIF).
Consortium Name :	Long Name of the consortium for more Information.
Consortium Name 2 :	Long Name of the consortium for more Information.
Street :	Street.
Country-Zip-Town :	Country code, e.g. "D" for Germany
Zip Code :	ZIP code
Town :	Town
Country :	Country
Contact Person :	Name
Email :	Email address of contact person.
Telephone No. :	Telephone number of the contact person.
Fax No. :	Fax no. the contact person.
Graphic Colors :	Used for colors to appeara on graphics. They distinguish different tariff rates and channels.
Schedule :	You can specify the users overall reading times. A click on the schedule time, a window opens to select the time.

COMPANY

COMPANY OVERVIEW

Here all defined companies will be displayed. The user can create new company (as Activations in the license file) by double clicking in the name of a company to view, modify or delete. Using the Summary Screen: See the general description.

Short Name↑	Company Name	Town	Contact Person	Telephone No.
CB	CB	Nürnberg		
CBG	CBG	Berlin		
GMC-Germany	GMC-Germany	Hamburg		

Properties :

Short Name :	Short name of company, which is used in EMC.
Company Name :	Long name for more information.
Town :	Location of the company.
Contact Person :	Name.
Telephone No. :	Telephone no. the contact person

COMPANY

Each company has its own master data. The company is the generic term for all settings of a company. Actions are strictly performed separately for each company.

In the consortium version, the user "Admin" can enter the company data itself. For all other versions of a company, the consortium of companies provide the same information and information come from the license file (name, address, tax no. can not be changed by the user).

admin 03-04-2013 17:04:41

Company - Detail

Short Name* :

Company Name* :

Street : Südwestpark 15

Country-Zip-Town : D 90449 Nürnberg

Country : Germany

Contact Person :

Telephone No. :

Internet Address :

Email :

Fax No. :

Tax No. :

Measurement Category : Electricity
Gas

Graphic Colors : Tariff1 Tariff2 Tariff3 Tariff4
Tariff5 Tariff6 Tariff7 Tariff8
Tariff9 Tariff10 Tariff11 Tariff12

Schedule: Schedule not defined

Level: 2

Properties :

Picture :	Here a picture of the company will be displayed. Image can be select using browse button(JPG, GIF).
Short Name :	Short name that is used in EMC (15 characters)
Company Name :	Long Name of the company for more information
Company Name2 :	Long Name of the company for more information
Street :	Street.
Country-Zip-Town :	Country code, for example "D" for Germany
Zip Code :	ZIP code
Town :	Town
Country :	Country
Contact Person :	Name
Telephone No. :	Telephone no. of the contact person
Internet Address :	Home page of the company
Email :	Email address of contact person
Fax No. :	Fax no. of the contact person
Tax No. :	Tax number of the company
Measurement Category :	Determine which types of energy is used in this company
Graphic Colors :	Used for colors to appear on graphics. They distinguish different tariff rates and channels.
Schedule :	You can specify the users overall reading times. A click on the schedule time, a window opens to select the time

LOCATION

LOCATION OVERVIEW

A company can have several locations where there are offices or factory buildings. These can be defined here in order to graphics, reports, etc. to allow for easier selection.

In the event that a company has only one location, the address information of the location identical to the address information the company.

The overview screen lets you select for display, modification and deletion of location as well as the reconstruction of the Locations.

Company↑	Location↑	Description	Street	Contact Person	Telephone No.
CB	Nürnberg	Nürnberg	Thomas-Mann-Str. 16-20		
CBG	Berlin	Berlin	Krausnickstr. 12 A		
GMC-Germany	Hamburg	Hamburg	Axel-Springer-Platz 1		

Properties :


Company :	Select Company (key field)
Location :	Town name or the location
Description :	Short description of the location
Street :	Street.
Contact Person :	Name.
Telephone No. :	Telephone No.
Company :	Company

LOCATION - DETAIL

Use this screen to enter details of the locations. Most fields can be filled or be left blank

admin 03-04-2013 17:08:34

Location - Detail

Short Name* : Picture : 

Description :

Company* : GMC-Germany

Street : Axel-Springer-Platz 1

Country-Zip-Town : D 20350 Hamburg

Country : Germany


Contact Person :

Email :

Telephone No. :

Fax No. :

Schedule : Schedule not defined

Level: 2 

Properties :

Short Name :	Short name of the location (used in EMC).
Picture :	Here a picture of the location will be displayed. Image can be select using browse button (JPG, GIF).
Description :	Any description
Company :	Select Company (key field)
Street :	Street.
Country-Zip-Town :	Country code, e.g. "D" for Germany
Zip :	Zip Code
Town :	Town
Country :	Country
Contact Person :	Name.
Email :	Email address of contact person
Telephone No. :	Telephone no. the contact person
Fax No. :	Fax no. the contact person
Schedule :	You can specify the users overall reading times. A click on the schedule time, a window opens to select the time

SUMMATOR-DATA LOGGER

SUMMATOR-DATA LOGGER OVERVIEW

Data loggers store the meter readings / consumption of the connected meters at specified minute intervals. The data are then read by EMC at specific times from the data logger and stored as historical data in database tables.

The table shows all defined data logger in the company structure (company / Location / data logger). It allows to define new datalogger and to modify or delete existing datalogger.

admin		Summator-Data Logger - Overview				03-04-2013 17:10:03
Company	All	Type	All	Access Via	All	
Location	All	Model	All			
Company↑	Location↑	Device Name	Type	Model	Access Via	
CB	Nürnberg	DL-SC1	SMARTCONTROL	U200A	TCP/IP	
CBG	Berlin	Geb. 14	Summator	U 1601	Serial	
GMC-Germany	Hamburg	SU-DL1	Summator	U 1601	Serial	
GMC-Germany	Hamburg	SC-DL1	SMARTCONTROL	U200A	TCP/IP	
GMC-Germany	Hamburg	TestSL	SmartLogger	U201A-Ethernet	TCP/IP	

Level: 1 [Navigation icons] All 1 1-5(5)

Properties :

- Company :** Company (Key Field)
- Location :** Location (Key Field)
- Company :** Company
- Location :** Location
- Device Name :** Name of the data logger
- Type :** Type
- Model :** Type of data logger
- Access Via :** Type of the connection used to access the data logger.
 1) TCP / IP (Intranet / Internet)
 2) Serial interface (COM port)
 3) access through a SU160x SU160x head station
 4) modem connection
- Type :** Manufacturer
- Model :** Model
- Access Via :** Access Via

SUMMATOR/DATA LOGGER - DETAIL

This screen details are set for the data logger manufacturer, the data logger type, device name and the company structure (company / location) integrated.

After selecting the manufacturer and type of access will change the lower part of the screen and only required fields are displayed for the appropriate selection.

It should always be read all data from all meters for each reading interval and be stored. Some devices of a data logger can not be selected. Nominated by the upper hierarchy structures (consortium, company, location) here can vary the readout time is set for this device.

This screen can also be defined that meter reading is to be read from a text / csv file by selecting the manufacturer.

The screenshot shows a web form titled "Summator/Data Logger - Detail" with a user "admin" and a timestamp "03-04-2013 17:11:34". The form contains the following fields and options:

- Company*: GMC-Germany (dropdown)
- Location*: --Select-- (dropdown)
- Device Name*: (text input)
- Description: (text area)
- Type*: U170 (dropdown)
- Model*: --Select-- (dropdown)
- Station Name*: (text input)
- Station Id*: (text input)
- Password: (password input)
- Reading Interval*: 15 min (dropdown)
- Access via*: [TCP/IP] [Master] [Serial] [Telephone] (radio buttons)
- IP Address*: (text input)
- Port No*: (text input)
- Schedule: Schedule not defined (text)

At the bottom left, it says "Level: 2" and has navigation icons. At the bottom right, there is a "Picture:" section with a small image and a delete icon.

Properties :

Company :	Select Company (key field)
Location :	Select Location (key field)
Device Name :	Name of the data logger
Description :	Any Description
Type :	Name of the data loggers manufacturer or selection of data entry via a file
Model :	Model of the data logger
Station Name :	Station name of the data logger
Station Id :	It is necessary to enter station ID in order to access data in data logger (Note: the station id must be same as Data logger ID programmed in the data logger.)
Password :	Password of the data logger (if any)
Reading Interval :	Every 5 minutes / 15 minutes or at specified times
Access via :	1) TCP / IP 2) Master (SU160x head-end) 3) Serial communication (COM-Port, RS232) 4) Telephone / Modem
Port :	Port Standard = COM
COM Port No. :	COM Port No. of the PC
Baud Rate :	Baud rate default = 9600
Data Bits :	Data bits = 8 standard
Parity :	Parity bit default = None
Stop Bits :	Stop bit standard = 1
Flow Control :	Standard=XON/XOFF
Telephone No. :	Telephone no. is to be enter
Modem Command :	Modem command must be send to the modem before dialing
IP Address :	IP address of the device, optionally, TCP / IP Converter
Port No. :	Port no.

Parent Data Logger :	If the data logger is in slave mode it is required to define the master data logger as parent data logger
OPC-Features :	OPC Features: - DA-Realtime Graph Only - DA-Realtime with storage - HDA-Historical Data
EMC Server Drive :	EMC Server Drive
Folder Path :	Directory path for the file to be save
File Name :	Name of the file.
Data Interval :	Data Interval: 1) 1 Minutes 2) 5 Minutes 3) 15 Minutes 4) Hourly
Decimal Format :	Decimal format ("." Or ",", for example, 5.86 or 5.86)
Field Separator :	Field-separator ("," or ";") e.g. Field1, Field2, Field3, Field4... Field1; Field2; Field3: Field4
Consumption :	File-values ("consumption" or "Meter Reading")
Reading Type :	- Reading type (columns or by rows) - Line by Line: 96 values in a row with date - By Column: The row with a value date - time
Reading DateTime :	Read Date Time: reading date - time in one column and separated into two
Time Rounding :	Time Rounding
Reading Date Format :	Select the format e.g. "01/01/2012" or "01:01:12"
Data Start Line :	Start line for data
Schedule :	You can specify the users overall reading times. A click in the readout time the window opens to select the times.
Input Data Interface Configuration :	Data entry configuration: columns: Name, selection, column no. Column no. specifies the column in which the corresponding field in the entry is found. Company: Company (key field) Location: Location (key field) Data loggers: Data logger (key field) Channel: Instead of the channel as an alternative, Channel nfo1 or Channel info2 of the channel can be found. Reading date and time Consumption: Consumption in the interval
Picture :	Here a picture of the data logger will be displayed. Image can be select using browse button (JPG, GIF).

CHANNEL

CHANNEL OVERVIEW

As channels are designated to meters. The summary screen shows all the existing meters and is used for construction of new channels to choose from existing counters to view, edit, or delete.

admin
Channel - Overview
03-04-2013 17:13:13

Company All
Summator/Data Logger All
Supplier Flag All

Location All
Measurement Category All

Company	Location	Summator/Data Logger	Channel Name	Channel No	Program Id	Description	Measurement Category	Supplier Channel	Status
CB	Nürnberg	DL-SC1	CB-DL-29	29	2.00	CB-DL-29	Electricity	✓	●
CB	Nürnberg	DL-SC1	CB-DL-30	30	-	CB-DL-30	Electricity	-	●
CB	Nürnberg	DL-SC1	CB-DL-31	31	-	CB-DL-31	Electricity	-	●
CBG	Berlin	Geb. 14	DL 24/001	1	-	DL 24/001	Electricity	-	●
CBG	Berlin	Geb. 14	DL 24/002	2	-	DL 24/002	Electricity	-	●
CBG	Berlin	Geb. 14	DL 24/003	3	-	DL 24/003	Electricity	-	●
CBG	Berlin	Geb. 14	DL 24/004	4	-	DL 24/004	Electricity	-	●
CBG	Berlin	Geb. 14	DL 24/005	5	-	DL 24/005	Electricity	-	●
GMC-Germany	Hamburg	SC-DL1	St-SC-25	401	-	St-SC-25	Electricity	✓	●
GMC-Germany	Hamburg	SC-DL1	St-SC-26	26	2.00	St-SC-26	Electricity	-	●
GMC-Germany	Hamburg	SC-DL1	St-SC-27	27	2.00	St-SC-27	Electricity	-	●
GMC-Germany	Hamburg	SC-DL1	St-SC-28	402	-	St-SC-28	Electricity	✓	●
GMC-Germany	Hamburg	SC-DL1	St-SC-32	32	-		Electricity	-	●
GMC-Germany	Hamburg	SC-DL1	St-SC-1	1	-		Electricity	-	●
GMC-Germany	Hamburg	SU-DL1	St-SU-1	1	-	St-SU-1	Electricity	-	●

Level: 1

← + ↺ ↻

1 ◀ 1 ▶ 1 1 - 15(15)

Properties :

- Company :** Company Name
- Location :** Location name
- Summator/Data Logger :** Data Logger name
- Channel Name :** Channel name
- Channel No :** Channel No
- Program Id :** Program Id
- Description :** Any description
- Measurement Category :** Measurement Category
- Supplier Channel :** Displays whether the channel is supplier or not.
- Status :** Status
- Company :** Company
- Location :** Location
- Summator/Data Logger :** Summator/Data Logger
- Measurement Category :** Select one approved energy-type for this company
- Supplier Flag :** Supplier Flag:
- Supplier
- Non- Supplier

CHANNEL - DETAILS

Display all information stored in the channel that are needed to counter values in the required form for later process and to be able to view.

To identify a channel four unique information from the company structure is required: company, location, Data Logger and channel name.

You can also see under "EMC General" Notes on the Smart Control

Properties :

Company :	Select company (key field)
Location :	Select location (key field)
Summator/Data Logger :	Select data logger (key field)
Exchange Channel :	Select existing channel. This entry is simplified, as the most data are pre-assigned from the sample channel
Channel :	Select a free channel no. to this data logger
Program Id :	Specifies the Program ID
Channel Name :	The name of the channel is automatically suggested and can be overwritten by the user: XX-YY-ZZ XX 2 characters of the site YY 2 characters of the data logger ZZ channel no.
Description :	Any description
Channel Info 1 :	Any channel information of the user. This information can be analyzed later
Channel Info 2 :	Any channel information of the user. This information can be analyzed later
Calibration Date :	Date on which the meter will be calibrated again.
Picture :	Channel Logo or image of meter installed can be uploaded here using browse window.
Measurement Category :	Select an approved energy types of this company for the meters.
Channel Class :	Active energy / Reactive energy
Active Channels :	Active Channels
Supplier Channel :	Here you define whether the consumption is for internal use or the channel carries information about supplier. Supplier - This can be more than one channel for a given location. Non Supplier - These are normal energy consuming channels.
Status :	Active Channel/Inactive Channel
Correction Factor :	Conversion ratio E.G. Transformer ratio of 1:20, then the factor = 20
Input Scaling :	Unit, in which the values come from the meter

Pulses per Input Unit : For data logger to sum the pulses that will account for one unit of consumption.

Output Scaling : Output Scaling

Storage Period(Days) : Number of days, the reading ​​to be stored.
e.g. "30" - values ​​will be deleted after 30 days.
The value "0" means infinite storage

ELECTRO PARAMETER

ELECTRO PARAMETER OVERVIEW

In this screen, all defined electrical parameters for electricity meters are shown.
E.g. Amps, Volts, Power Factor.

Parameters are applied to the meters which are connected to the Smart Control: These can be displayed in real-time graphics.

In preparation: These values can be stored as historical data for a short time.

This screen is used for the new construction of electrical parameters, double-click on electrical parameters to display, modify and delete.

Company↑	Location↑	Summator/DataLogger↑	Channel	Parameter Name	Description
GMC-Germany	Hamburg	SC-DL1	St-SC-25	Active Energy	
GMC-Germany	Hamburg	SC-DL1	St-SC-26	Active Power	

Properties :

Location :	Location (Key field)
Summator/DataLogger :	Summator/DataLogger (Key field)
Channel :	Channel (Key field)
Company :	Company
Location :	Location
Summator/DataLogger :	DataLogger
Channel :	Channel
Parameter Name :	Parameter name, as stored in Smart Control
Description :	Standard description, e.g. "Ah, Phase 1"

ELECTRO PARAMETER - DETAIL

In the channel screen all information is stored that is needed to view and use meter readings in the required form.

To identify a channel / meter unambiguously 5 Information from the business structure is required: company, location, data logger, channel name and parameter name.

This functionality applies only to the Smart Control. Also see under "EMC General" Notes on the Smart Control

The screenshot shows a web application interface for 'Electro Parameter - Detail'. At the top left, there is a user profile for 'admin' with a flag icon. The title 'Electro Parameter - Detail' is centered at the top, and the timestamp '03-04-2013 17:21:51' is at the top right. The form contains several fields: 'Company' (dropdown menu with 'GMC-Germany' selected), 'Location' (dropdown menu with 'Hamburg' selected), 'Summator/DataLogger' (dropdown menu with 'SC-DL1' selected), 'Channel' (dropdown menu with 'St-SC-25 [St-SC-25]' selected), 'Program ID*' (text input with '0|00'), 'Parameter Name*' (text input), 'Parameter Description' (text area), 'Output Unit' (text input), and 'Storage Period(Days)' (text input with '0'). At the bottom left, there are navigation icons and the text 'Level: 2'.

Properties :

Company :	Select Company (key field)
Location :	Select Location (key field)
Summator/DataLogger :	Select data logger (key field)
Channel :	Select channel name (key field)
Channel No :	Channel No
Program ID :	Program the Smart Control with parameters number with fraction
Program ID (fractional part) :	Program ID (fractional part)
Parameter Name :	Parameter Name from the Smart Control
Parameter Description :	Any description, e.g. "Phase 1 ampere"
Output Unit :	Unit, which will be displayed in the graph
Storage Period(Days) :	Number of days, as long as the values to be stored. e.g. "30" - values will be deleted after 30 days. The value "0" means unlimited storage (currently in progress)

HISTORICAL GRAPH

Consumption values which were previously read from the data logger and stored can be graphically display. For the graphic display two screens are there:

- 1) The selection screen, with the selection screen, the user controls which meter data they want to see and in what form.
- 2) The display screen, the selected graphic is shown here. Selected display formats can be modified directly in this screen

The user can always switch between two screens and redefine its selection or correct or change the appearance. Switching between the two screens is done by clicking the black arrow in the upper left screen area.

There are a number of different graphic shapes to choose from, however, is to note that not every graphical representation for all forms of selection makes sense. In these cases, the graphic symbols are locked.

In order to display graphics, steps are as follow.

- 1) Selecting one or more channels
- 2) If necessary. Select the desired graphic display (default: bar graph)
- 3) If necessary. Selection of additional functions, such as graph type, grid lines, date comparison.
- 4) Select the date

General notes:

- 1) Multiple selections are possible e.g. multiple selections of channels are possible by Control + click (Windows feature).
 - 2) The graph always starts with the smallest unit of the selected channels.
- For E.g. Selected channels are available for 5 minutes value. Zooming is possible in the display screen.

Properties :

Measurement Category :	Select one or more energy types
Company :	Select one or more company
Location :	Select one or more location
Summator/Data Logger :	Select one or more data logger
Channel :	Select one or more channels
Electro Parameter :	In prepration
Graph Type :	1) consumption (Time interval, e.g. 15 minutes) 2) load speed (Time interval, e.g. 15 minutes) 3) Only schedule data for this channel
Date Selection :	Date Selection
Grid Lines :	If checked, grid lines will be shown in the background
Date Comparison :	Second window is displayed to select a date, one channel compared to two days; this is not possible when multiple channels are selected
Date Type :	Date Type
show_date :	This is used to select the date / month and year for which graphic need to be seen.
show_date1 :	This is used to select the date / month and year for which graphic need to be seen.
Flexible Date :	Flexible Date
Flexible Date Time :	Flexible Date Time

COMPANY GRAPH

COMPANY GRAPH OVERVIEW

Here you get to see the information about Personal Graph. The main information like, Personal graph name and Graph Type etc...

admin 03-04-2013 17:49:03

Company All Graph Interval All

Chart Type All

Company↑	Personal Graph Name	Chart Type	Graph Interval
--	StackVBar	Stacked Vertical Bar	15 Min
--	TestGraph	Stacked Vertical Bar	15 Min
--	TariffGraph	Stacked Vertical Bar	15 Min
GMC-Germany	QWE	Stacked Vertical Bar	15 Min
GMC-Germany	Test-Comment	Stacked Vertical Bar	15 Min

Level: 1 All 1-5(5)

Properties :

Company :	Company
Personal Graph Name :	Graphic name that was assigned by the user
Chart Type :	Chart Type
Graph Interval :	E.g. 5 min, 15 min
Company :	Company
Chart Type :	Chart Type
Graph Interval :	Graph Interval

HISTORICAL GRAPH

Consumption values which were previously read from the data logger and stored can be graphically display. For the graphic display two screens are there:

- 1) The selection screen, with the selection screen, the user controls which meter data they want to see and in what form.
- 2) The display screen, the selected graphic is shown here. Selected display formats can be modified directly in this screen

The user can always switch between two screens and redefine its selection or correct or change the appearance. Switching between the two screens is done by clicking the black arrow in the upper left screen area.

There are a number of different graphic shapes to choose from, however, is to note that not every graphical representation for all forms of selection makes sense. In these cases, the graphic symbols are locked.

In order to display graphics, steps are as follow.

- 1) Selecting one or more channels
- 2) If necessary. Select the desired graphic display (default: bar graph)
- 3) If necessary. Selection of additional functions, such as graph type, grid lines, date comparison.
- 4) Select the date

General notes:

- 1) Multiple selections are possible e.g. multiple selections of channels are possible by Control + click (Windows feature).
 - 2) The graph always starts with the smallest unit of the selected channels.
- For E.g. Selected channels are available for 5 minutes value. Zooming is possible in the display screen.

Properties :

Measurement Category :	Select one or more energy types
Company :	Select one or more company
Location :	Select one or more location
Summator/Data Logger :	Select one or more data logger
Channel :	Select one or more channels
Electro Parameter :	In prepration
Graph Type :	<ol style="list-style-type: none"> 1) consumption (Time interval, e.g. 15 minutes) 2) load speed (Time interval, e.g. 15 minutes) 3) Only schedule data for this channel
Date Selection :	Date Selection
Grid Lines :	If checked, grid lines will be shown in the background
Date Comparison :	Second window is displayed to select a date, one channel compared to two days; this is not possible when multiple channels are selected
Date Type :	Date Type
show_date :	This is used to select the date / month and year for which graphic need to be seen.
show_date1 :	This is used to select the date / month and year for which graphic need to be seen.
Flexible Date :	Flexible Date
Flexible Date Time :	Flexible Date Time

COMPANY REALTIME GRAPH

COMPANY REALTIME GRAPH OVERVIEW

Personal graphics are graphics that can create a unique user, to be able to retrieve data on a regular basis. If the graph is created, the selection criteria will be eliminating.

This screen shows all the pre-created, personal graphics. Double clicking on one line, the graphic is displayed immediately.

Deleting a Personal Graphics:

- 1) Select the graphic with the help of the overview screen
- 2) In the display screen, click on the delete button

Company	Personal RealTime Graph Name	Graph Type
All	TEST-1	LINE

Properties :

- Company :** Company
- Personal RealTime Graph Name :** Graphic name that was assigned by the user
- Graph Type :** For example Lines, range
- Company :** Company

REALTIME GRAPH

In contrast to the historical images that rely on previously stored values, in the real-time graphics, the values obtained from meters up to date (via the data logger) and displayed.

The real-time graphics are always for the additional electrical parameters that must be previously defined in the company structure.

This includes two screens:

- 1) The selection screen
With the selection screen, the user controls which meter data they want to see
- 2) The display screen
Here, the selected graphic displays

The user can always switch between two screens and correct the selection or include additional parameters in the graphic. It can display up to 4 parameters in one screen. Switching between the two screens is done by clicking the black arrow in the upper left screen area

General notes:

- 1) A multiple-selection of more than one parameter is not possible. The user can have only one parameter to include in the graph.
- 2) The real-time graphics is only for the Smart Control.

Measurement Category :	Location :	Channel :	Electro Parameter :
Electricity	Hamburg	St-SC-25 [St-SC-25]	Active Energy[]
Gas		St-SC-26 [St-SC-26]	
Water		St-SC-27 [St-SC-27]	
		St-SC-28 [St-SC-28]	
		St-SC-32 []	
		St-SC-1 []	

Company :	Summator/Data Logger :
GMC-Germany	SC-DL1
CB	SU-DL1
CBG	

Properties :

Measurement Category :	Select one, several or all of energy types
Company :	Select one, several or all of the company
Location :	Select one, several or all locations
Summator/Data Logger :	Select one, several or all of the data logger
Channel :	Select one or more channels
Electro Parameter :	Selection of an electrical parameter

HISTORICAL REPORT

Reports always worth the previously reading of consumption from the data loggers
There are the following report types:

- 1) Time, manual reports
- 2) Periodic reports (may be considered "Personal Reports" are filed)
- 3) Automatic reports (scheduled to be created)

The reports can be created in various forms of output, e.g. as XLS, PDF.

Examples of the different areas that can be created with this selection screen are included in the appendix of the printed manual.

Properties :

- | | |
|--------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Measurement Category : | Select one or more energy types |
| Company : | Select one or more company |
| Location : | Select one or more locations |
| Summator/Data Logger : | Select one or more data loggers |
| Channel : | Select one or more channels |
| Electro Parameter : | In preparation |
| Report Type : | 1) Summary: Only total is shown
2) Detail: Interval values are shown |
| Parameter Type : | Selection: "Consumption" / "load"
(Valid if only 1 channel is selected, and Report Type is "Detail") |
| View Detail : | View Detail |
| Date Type : | Relative: "Yesterday," "Last Week", "Last month" (For recurring reports)
Fixed: Select a start date up to a date to be evaluated |
| Monthly Meter Reading : | Monthly Meter Reading |
| Relative Date : | Here what you see is done in relation to the selection of dropdown. Dropdown is activated when the relative date option is selected in the radio button. Report can be generated for last month, last week, last 4 weeks and yesterday |
| StartTime : | StartTime |
| EndTime : | EndTime |
| Start Date : | Fixing start date to generate report of selected channel |
| End Date : | Fixing end date to generate report of selected channel |
| Company Report Name : | Specify a name under which the report is to be stored in EMC (For recurring reports). |
| Action Type : | A file is created, an e-mail is sent. The following formats are available XLS, PDF, CSV, HTML, DOC, TXT |
| User Group : | Click the button to open user group screen and select the group name. |
| Email Address : | Send selected formatted files to the specified e-mail address |
| Subject : | Subject |

Message :	E-mail text
Attachment Format :	File type: - CSV - XLS - PDF - HTML - TXT
File Format :	File Format: - PDF - XLS - CSV - HTML - DOC - XML
Report On :	Storage
EMC Server Drive :	EMC Server Drive
Folder Path :	Save selected files to specified folder path.
File Name :	Name of the file
Host Address :	Host Address
Port :	Port
User Name :	User Name
Password :	Password
Folder Name :	Folder Name
Schedule :	Here the user can define when the report should be automatic create. Click on the date to open the window to select the times.
Values :	Values

HISTORICAL REPORT

Reports always worth the previously reading of consumption from the data loggers
There are the following report types:

- 1) Time, manual reports
- 2) Periodic reports (may be considered "Personal Reports" are filed)
- 3) Automatic reports (scheduled to be created)

The reports can be created in various forms of output, e.g. as XLS, PDF.

Examples of the different areas that can be created with this selection screen are included in the appendix of the printed manual.

Properties :

- Measurement Category :** Select one or more energy types
- Company :** Select one or more company
- Location :** Select one or more locations
- Summator/Data Logger :** Select one or more data loggers
- Channel :** Select one or more channels
- Electro Parameter :** In preparation
- Report Type :**
 - 1) Summary: Only total is shown
 - 2) Detail: Interval values are shown
- Parameter Type :** Selection: "Consumption" / "load"
(Valid if only 1 channel is selected, and Report Type is "Detail")
- View Detail :** View Detail
- Date Type :** Relative: "Yesterday," "Last Week," "Last month" (For recurring reports)
Fixed: Select a start date up to a date to be evaluated
- Monthly Meter Reading :** Monthly Meter Reading
- Relative Date :** Here what you see is done in relation to the selection of dropdown. Dropdown is activated when the relative date option is selected in the radio button. Report can be generated for last month, last week, last 4 weeks and yesterday
- StartTime :** StartTime
- EndTime :** EndTime
- Start Date :** Fixing start date to generate report of selected channel
- End Date :** Fixing end date to generate report of selected channel
- Company Report Name :** Specify a name under which the report is to be stored in EMC (For recurring reports).
- Action Type :** A file is created, an e-mail is sent. The following formats are available XLS, PDF, CSV, HTML, DOC, TXT
- User Group :** Click the button to open user group screen and select the group name.
- Email Address :** Send selected formatted files to the specified e-mail address
- Subject :** Subject

Message :	E-mail text
Attachment Format :	File type: - CSV - XLS - PDF - HTML - TXT
File Format :	File Format: - PDF - XLS - CSV - HTML - DOC - XML
Report On :	Storage
EMC Server Drive :	EMC Server Drive
Folder Path :	Save selected files to specified folder path.
File Name :	Name of the file
Host Address :	Host Address
Port :	Port
User Name :	User Name
Password :	Password
Folder Name :	Folder Name
Schedule :	Here the user can define when the report should be automatic create. Click on the date to open the window to select the times.
Values :	Values

HISTORICAL REPORT

Reports always worth the previously reading of consumption from the data loggers
There are the following report types:

- 1) Time, manual reports
- 2) Periodic reports (may be considered "Personal Reports" are filed)
- 3) Automatic reports (scheduled to be created)

The reports can be created in various forms of output, e.g. as XLS, PDF.

Examples of the different areas that can be created with this selection screen are included in the appendix of the printed manual.

Properties :

- Measurement Category :** Select one or more energy types
- Company :** Select one or more company
- Location :** Select one or more locations
- Summator/Data Logger :** Select one or more data loggers
- Channel :** Select one or more channels
- Electro Parameter :** In preparation
- Report Type :**
 - 1) Summary: Only total is shown
 - 2) Detail: Interval values are shown
- Parameter Type :** Selection: "Consumption" / "load"
(Valid if only 1 channel is selected, and Report Type is "Detail")
- View Detail :** View Detail
- Date Type :** Relative: "Yesterday," "Last Week", "Last month" (For recurring reports)
Fixed: Select a start date up to a date to be evaluated
- Monthly Meter Reading :** Monthly Meter Reading
- Relative Date :** Here what you see is done in relation to the selection of dropdown. Dropdown is activated when the relative date option is selected in the radio button. Report can be generated for last month, last week, last 4 weeks and yesterday
- StartTime :** StartTime
- EndTime :** EndTime
- Start Date :** Fixing start date to generate report of selected channel
- End Date :** Fixing end date to generate report of selected channel
- Company Report Name :** Specify a name under which the report is to be stored in EMC (For recurring reports).
- Action Type :** A file is created, an e-mail is sent. The following formats are available XLS, PDF, CSV, HTML, DOC, TXT
- User Group :** Click the button to open user group screen and select the group name.
- Email Address :** Send selected formatted files to the specified e-mail address
- Subject :** Subject

Message :	E-mail text
Attachment Format :	File type: - CSV - XLS - PDF - HTML - TXT
File Format :	File Format: - PDF - XLS - CSV - HTML - DOC - XML
Report On :	Storage
EMC Server Drive :	EMC Server Drive
Folder Path :	Save selected files to specified folder path.
File Name :	Name of the file
Host Address :	Host Address
Port :	Port
User Name :	User Name
Password :	Password
Folder Name :	Folder Name
Schedule :	Here the user can define when the report should be automatic create. Click on the date to open the window to select the times.
Values :	Values

METER CALIBRATION REPORT

METER CALIBRATION REPORT OVERVIEW

This report shows all channels must be calibrated soon again. After calibration, the user enters the new calibration date in the channel screen again.

admin Meter Calibration 03.04.2013 18:01:19

Company All Summator/Data Logger All

Location All Measurement Category All

Company† 1	Location† 2	Summator/Data Logger† 3	Channel Name	Measurement Category	Calibration Date
CB	Nürnberg	DL-SC1	CB-DL-29	Electricity	--
CB	Nürnberg	DL-SC1	CB-DL-30	Electricity	--
CB	Nürnberg	DL-SC1	CB-DL-31	Electricity	--
CBG	Berlin	Geb. 14	DL 24/001	Electricity	--
CBG	Berlin	Geb. 14	DL 24/002	Electricity	--
CBG	Berlin	Geb. 14	DL 24/003	Electricity	--
CBG	Berlin	Geb. 14	DL 24/004	Electricity	--
CBG	Berlin	Geb. 14	DL 24/005	Electricity	--
GMC-Germany	Hamburg	SC-DL1	St-SC-25	Electricity	--
GMC-Germany	Hamburg	SC-DL1	St-SC-26	Electricity	--
GMC-Germany	Hamburg	SC-DL1	St-SC-27	Electricity	--
GMC-Germany	Hamburg	SC-DL1	St-SC-28	Electricity	--
GMC-Germany	Hamburg	SC-DL1	St-SC-32	Electricity	--
GMC-Germany	Hamburg	SC-DL1	St-SC-1	Electricity	--
GMC-Germany	Hamburg	SU-DL1	St-SU-1	Electricity	--

Level: 1 All 1 1 - 15(15)

Properties :

- Company : Company
- Location : Location
- Summator/Data Logger : Data Logger
- Measurement Category : Measurement Category
- Company : Company
- Location : Location
- Summator/Data Logger : Data Logger
- Channel Name : Channel Name
- Measurement Category : Measurement Category
- Calibration Date : Displays the next calibration due date

COMPANY REPORTS

COMPANY REPORTS OVERVIEW

Company reports are reports that the user can uniquely create, to be able to retrieve them regularly.

If the report is created, eliminating the selection criteria of all, since you work with a relative date range, e.g. show certain channels by day "yesterday"

This screen shows all the pre-created, personal graphics. Double clicking a line will display the reports immediately.

Deleting a Personal Report:

- 1) Select the report using the overview screen
- 2) In the display screen, a click on the delete button

Company	Report Name	Report Type
--	TC-1	Total Consumption
--	Tc Test	Monthly Meter Reading Report
--	Test-Mail	Detail Report
--	QWERTY	Detail Load Report
--	VC-R	Detail Report
--	TotalCReport	Total Consumption

Properties :

Company :	Company
Report Name :	Name that was assigned by the user.
Report Type :	E.g. "Consumption Report" or "Meter Reading Report".
Company :	Company
Report Type :	Report Type

HISTORICAL REPORT

Reports always worth the previously reading of consumption from the data loggers
There are the following report types:

- 1) Time, manual reports
- 2) Periodic reports (may be considered "Personal Reports" are filed)
- 3) Automatic reports (scheduled to be created)

The reports can be created in various forms of output, e.g. as XLS, PDF.

Examples of the different areas that can be created with this selection screen are included in the appendix of the printed manual.

Properties :

- Measurement Category :** Select one or more energy types
- Company :** Select one or more company
- Location :** Select one or more locations
- Summator/Data Logger :** Select one or more data loggers
- Channel :** Select one or more channels
- Electro Parameter :** In preparation
- Report Type :**
 - 1) Summary: Only total is shown
 - 2) Detail: Interval values are shown
- Parameter Type :** Selection: "Consumption" / "load"
(Valid if only 1 channel is selected, and Report Type is "Detail")
- View Detail :** View Detail
- Date Type :** Relative: "Yesterday," "Last Week," "Last month" (For recurring reports)
Fixed: Select a start date up to a date to be evaluated
- Monthly Meter Reading :** Monthly Meter Reading
- Relative Date :** Here what you see is done in relation to the selection of dropdown. Dropdown is activated when the relative date option is selected in the radio button. Report can be generated for last month, last week, last 4 weeks and yesterday
- StartTime :** StartTime
- EndTime :** EndTime
- Start Date :** Fixing start date to generate report of selected channel
- End Date :** Fixing end date to generate report of selected channel
- Company Report Name :** Specify a name under which the report is to be stored in EMC (For recurring reports).
- Action Type :** A file is created, an e-mail is sent. The following formats are available XLS, PDF, CSV, HTML, DOC, TXT
- User Group :** Click the button to open user group screen and select the group name.
- Email Address :** Send selected formatted files to the specified e-mail address
- Subject :** Subject

Message :	E-mail text
Attachment Format :	File type: - CSV - XLS - PDF - HTML - TXT
File Format :	File Format: - PDF - XLS - CSV - HTML - DOC - XML
Report On :	Storage
EMC Server Drive :	EMC Server Drive
Folder Path :	Save selected files to specified folder path.
File Name :	Name of the file
Host Address :	Host Address
Port :	Port
User Name :	User Name
Password :	Password
Folder Name :	Folder Name
Schedule :	Here the user can define when the report should be automatic create. Click on the date to open the window to select the times.
Values :	Values

COST CENTER DEFINITION

COST CENTER DEFINITION OVERVIEW

Under the EMC industry version includes the cost center accounting,
i.e. the assignment of measuring points of different types of energy to cost centers.

Maximum structure of cost centers (KST):

company
location
 Cost Area
 KST
 Sub-KST
 Sub-sub-KST

The various levels can each one or more measuring points are assigned, or percentage rates of individual counters.

The cost center overview shows all defined cost centers in their flat.

Company	Location	Cost Area	Cost Center	Sub Cost Center	Sub Sub Cost Center
GMC-Germany	Hamburg	ABT1	--	--	--
CB	Nürnberg	ABT2	--	--	--
GMC-Germany	Hamburg	ABT1	KST-1	--	--
CB	Nürnberg	ABT2	ABT- KST	--	--

Properties :

Company :	Company (Key Field)
Location :	Location (Key Field)
Company :	This column displays the company for the corresponding channel.
Location :	This column displays the location for the corresponding channel.
Cost Area :	Cost Area
Cost Center :	Cost Center
Sub Cost Center :	Sub Cost Center
Sub Sub Cost Center :	Sub Sub Cost Center

COST CENTER DEFINITION - DETAIL

In this screen, the cost centers are defined.
In the table, the measuring points are assigned to the KST.

admin
Cost Center Definition - Detail
03-04-2013 18:05:05

Parent Cost Center :

Company :

Location :

Cost Center :

Description :

Create Virtual Channel :

Channel Allocation				
Data Logger	Channel	Percentage	Meter Name	
SC-DL1	St-SC-26	100	12314141	✗
SC-DL1	St-SC-27	100	2141111	✗

Level: 2
Created By - admin, 07-11-2012 17:14:12
Modified By - admin, 18-12-2012 18:23:38

Properties :

- Parent Cost Center :** Name of the parent Cost Center
- Company :** Name of Company
- Location :** Name of Location
- Cost Center :** Name of Cost Center
- Description :** Any Description
- Create Virtual Channel :** If this checkbox is checked, then this automatically for KST, a virtual channel created, which can be evaluated in the graphics and reports.
- Channel Allocation :** In this table, assigned channels are shown that is assigned this Cost Center.
- Responsible :** Responsible

COST CENTER STRUCTURE

COST CENTER STRUCTURE OVERVIEW

This screen provides an overview of the Cost Center and its integration into the hierarchical structure of the company Cost Center.

admin Cost Center Structure 03-04-2013 17:36:15

Company All z ↓

Location All x ↓

Entity Type	Company	Location	Entity Name	Entity Description
Cost Area	GMC-Germany	Hamburg	ABT1	
Cost Center	GMC-Germany	Hamburg	KST-1	
Channel	GMC-Germany	Hamburg	St-SC-26 (100%)	St-SC-26
Channel	GMC-Germany	Hamburg	St-SC-27 (100%)	St-SC-27
Cost Area	CB	Nürnberg	ABT2	
Cost Center	CB	Nürnberg	ABT- KST	

Level: 1 All 1 1-6(6)

Properties :

- Entity Type :** Level wise structure of cost center
- Company :** Name of Company
- Location :** Name of Location
- Entity Name :** Cost Center Name
- Entity Description :** Cost Center Description
- Company :** Company (Key Field)
- Location :** Location (Key Field)

INVOICING

This screen is use to the billing of Cost Center are triggered.

admin
Invoicing
03-04-2013 18:08:18

Measurement Category :

- All
- Electricity
- Gas
- Water

Company :

- All
- GMC-Germany
- CB
- CBG

Cost Center Type :

- All
- Cost Area
- Cost Center
- Sub Cost Center
- Sub Sub Cost Center

Cost Center :

- All
- ABT1
- KST-1
- ABT2
- ABT- KST

< April > < 2013 >

Mo	Tu	We	Th	Fr	Sa	Su
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

< April > < 2013 >

Mo	Tu	We	Th	Fr	Sa	Su
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

Level: 1 admin

Invoicing 03-04-2013 18:11:09

From Date: 15.03.2012
To Date: 15.03.2012

Company Name	Provider	Cost Center Type	Cost Center Name	Consumption	Excess Energy Distribution	Total	Unit	Amount (in Euro)
GMC-Germany	Strom	Cost Area	ABT1	768.00	192.00	960.00	kWh	0.00
GMC-Germany	Strom	Cost Center	KST-1	768.00	192.00	960.00	kWh	0.00
Total: Cost Area				768.00	192.00	960.00	kWh	0.00
Total: Cost Center				768.00	192.00	960.00	kWh	0.00
Total: Sub Cost Center				0.00	0.00	0.00	kWh	0.00
Total: Sub Sub Cost Center				0.00	0.00	0.00	kWh	0.00

XML
PDF
CSV
HTML
DOC
XML

Properties :

- Measurement Category :** Energy-type (for example electricity, gas)
- Company :** Company (Key Field)
- Cost Center Type :** Cost Center Type (Key Field)
- Cost Center :** Cost Center(Key Field)
- Generate Report :** Generate Report

INVOICING

This screen allows the user to view the billing details of the cost centers. The screen shows in detail how to assemble the individual settlement items.

admin
Invoice Detail
03-04-2013 18:16:28

Measurement Category :

- All
- Electricity
- Gas
- Water

Company :

- All
- GMC-Germany
- CD
- CBG

Cost Center Type :

- All
- Cost Area
- Cost Center
- Sub Cost Center
- Sub Sub Cost Center

Cost Center :

- All
- ABT1
- KST-1
- ABT2
- ABT- KST

≤ April ≥
≤ 2013 ≥

Mo	Tu	We	Th	Fr	Sa	Su
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

≤ April ≥
≤ 2013 ≥

Mo	Tu	We	Th	Fr	Sa	Su
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30					

Level: 1 ← ↻ □

admin
Invoice Detail
03-04-2013 18:18:26

From Date: 15.03.2012		To Date: 15.03.2012						
Company Name	Provider	Cost Center Type	Cost Center Name	Channel Name	Percentage	Meter Name	Consumption	Unit
GMC-Germany	Strom	Cost Center	KST-1	St-SC-27	100.00	2141111	480.00	kWh
GMC-Germany	Strom	Cost Center	KST-1	St-SC-26	100.00	12314141	480.00	kWh
Total: Cost Center							960.00	kWh
Total: Sub Cost Center							0.00	kWh
Total: Sub Sub Cost Center							0.00	kWh

Properties :

- Measurement Category :** Energy-type (for example electricity, gas)
- Company :** Company (Key Field)
- Cost Center Type :** Cost Center Type (Key Field)
- Cost Center :** Cost Center(Key Field)
- Generate Report :** Generate Report

YEARLY COST CENTER

This screen generates an yearly overview of the consumption value of all cost centers. When tariffs are used, the consumption can also be displayed in money.

This evaluation accesses the Cost Center invoicing values. Therefore, it is essential to first create the Cost Center invoicing.

admin
Yearly Cost Center
03-04-2013 18:22:52

Company : All

Cost Center : All

Year : 2012

Consumption/Euro : Consumption Euro

Level: 1

admin
Yearly Cost Center
03-04-2013 18:25:55

Yearly Cost Center Report - 2012 (Consumption)

Cost Center	Provider	Unit	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Total	Average
GMC-Germany->ABT1	Strom	kWh	0.00	0.00	960.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	960.00	960.00
GMC-Germany->KST-1	Strom	kWh	0.00	0.00	960.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	960.00	960.00

Selection : Cost Center Level

XLS
PDF
CSV
HTML
DOC
XML

Properties :

- Company :** Company (Key Field)
- Cost Center :** Cost Center (Key Field)
- Year :** Year (Key Field)
- Consumption/Euro :** Consumption/Euro

VIRTUAL CHANNEL

VIRTUAL CHANNEL OVERVIEW

Virtual channels are channels that are not associated with a data logger or any meters. They exist only virtually and can be used for arithmetic operations, such as for the summation of two or more meters.

The particular arithmetic operation is performed to display the result graphically. They therefore occupy no storage space as the data loggers and meters associated with the channels.

The summary screen shows all defined virtual channels.

Virtual channels can be created for each company separately. In addition to the consortium version overriding of the virtual channels are created, which summarize the channels from several companies. The user must have administrator privileges for this.

Virtual channels can be linked via mathematical operations with channels and virtual channels.

Company	Virtual Channel Name	Consumption Unit	Load Unit
GMC-Germany	VC-Test	kWh	kW
GMC-Germany	KST-1	kWh	kWh

Properties :

Company :	Company
Virtual Channel Name :	User assigned name
Consumption Unit :	Unit, e.g. kWh
Load Unit :	Unit, e.g. kW
Company :	Select Company (key field)

VIRTUAL CHANNEL - DETAIL

In the detail screen Virtual channels can be viewed, changed and deleted.

Procedure for defining a new virtual channel:

- 1) Select a channel (real channel or virtual channel), through the selections of Energy type, company, location, data loggers)
- 2) Selection of an arithmetic operation, e.g. "+" For addition
- 3) Select another channel or a digit
- 4) Points 2) and 3) can be repeated as often.

The result is displayed in the window.

Procedure for modification of an existing virtual channel:

- 1) An existing channel is selected through overview screen
- 2) The lower right panel shows the solution of the virtual channel
- 3) Click on the channel or the arithmetic operation to be modified or deleted
- 4) Selection of another channel or another arithmetic operation
- 5) INS: It is always inserted before the selected field / arithmetic operation

The user should make sure that channels are used with the same units; this one may have to be converted. If channels with different reading intervals are used (e.g. 5-minute channel and 15-minute channel), then this channel is used with the larger reading interval (in this example 15 minutes). For the 5 minute channel, automatically summation of the 3 x 5 minute intervals for 1/4 hour is done

Properties :

Measurement Category :	Select one or more energy types
Company :	Select one or more company
Location :	Select one or more locations
Summator/Data Logger :	Select one or more data logger
Channel :	Select a channel
Electro Parameter :	In preparation
Calculator :	The user can enter numbers, select arithmetic operations, Insert (INS) or operands delete (DEL)
Formula :	Results of the formula.
Channel Name :	Name to be indicated for the virtual channel.
Consumption Unit :	Unit for consumption (for graphs and reports)
Load Unit :	Unit for the load (for graphs and reports)

MEASUREMENT

MEASUREMENT OVERVIEW

In this screen the user sees all the available measures (units).By default, the type of energy is "electricity".The user can have as many variables as define within its purchased license.

emc Measurement - Overview 29-08-2012 15:48:06

Short Name ↑	Consumption Unit	Load Unit
Compressed Air	Nm3	Nm3/h
Electricity	Wh	W
Frequency	Hz	Hz
Gas	Nm3	Nm3/h
Heat	Wh	W
Light	Lux	Lux
Power2	W	W
Pressure(Pa)	Pa	Pa
Temperature(°C)	°C	°C
Voltage	V	V
Water	m3	m3/h

Level: 1 [Navigation icons] All [Filter icon] 1 [Page navigation icons] 1 - 11(11) [Print icon]

Properties :

Short Name : Energy Name
Consumption Unit : Unit for consumption
Load Unit : Unit for the load

MEASUREMENT DETAILS

This screen allows the user to define new units, change, and delete the units.

The screenshot shows a web application interface for defining measurement details. At the top left, there is a user profile icon and the name 'emc'. The title 'Measurement Details' is centered at the top, and the timestamp '29-08-2012 15:49:01' is at the top right. The main content area contains several input fields:

- Measurement category :** A dropdown menu with 'Electricity' selected.
- Description :** A text input field containing 'Energy For Electricity'.
- Consumption Unit* :** A text input field containing 'Wh'.
- Power Unit* :** A text input field containing 'W'.
- Reactive Energy Unit :** A text input field containing 'VArh'.
- Reactive Power Unit :** A text input field containing 'VAr'.

At the bottom left, there is a 'Level: 2' label and a set of navigation icons: a left arrow, a square, a right arrow, and a close (X) icon.

Properties :

Measurement category :	Energy Type
Description :	Description, any text
Consumption Unit :	Unit for consumption, eg Wh
Power Unit :	Unit for the load profile, eg W
Reactive Energy Unit :	Available only for electricity
Reactive Power Unit :	Available only for electricity

PROVIDER

PROVIDER OVERVIEW

The energy provider is the generic term for fares that can be defined for each supplier.

emc Provider - Overview 29-08-2012 15:50:22

Short Name ↑	Town	Country	Contact Person
Gas			
Strom			
Voltage			
Wasser			

Level: 1 [Navigation icons] All [Filter icon] 1 [Page navigation icons] 1 - 4(4) [Print icon]

Properties :

- Short Name : Name of energy supplier
- Town : Town
- Country : Country

PROVIDER INFORMATION - DETAIL

This screen is used for entering information of energy suppliers

emc **Provider Information - Detail** 29-08-2012 15:51:14

Short Name* :

Provider Name :

Street :

Country-Zip-Town :

Country :

Contact Person :

Email :

Telephone No. :

Fax No :

Provider Url : http://

Rounding : Up

Level: 2

Properties :

Short Name :	Name of the energy suppliers (used in EMC)
Provider Name :	Long Name
Provider Name 2 :	Long Name 2
Street :	Address information
Country-Zip-Town :	Address information
Zip :	Address information
Town :	Address information
Country :	Address information
Contact Person :	Contact person for energy suppliers
Email :	Email address of contact person
Telephone No. :	Telephone no. of the contact person
Fax No :	Fax no. of the contact person
Provider Url :	Website of the energy suppliers
Rounding :	If the time for a tariff (day / night) do not fall on a full hour, changes can be set here. If you want to be rounded up or down

PROVIDER CHANNEL ALLOCATION

PROVIDER CHANNEL ALLOCATION OVERVIEW

The assignment of the individual channels is necessary for their main input meter, to detect, which channels (meter) sub-channels belong to which main meter.

This screen shows all defined-supplier channels.

Double clicking a selected channel (main meter) which can be associated with the next screen

Company↑	Location↑	Summator/Data Logger↑	Provider	Measurement Category	Provider Channel
GMC-Germany	Hamburg	SC-DL1	Strom	Electricity	St-SC-25

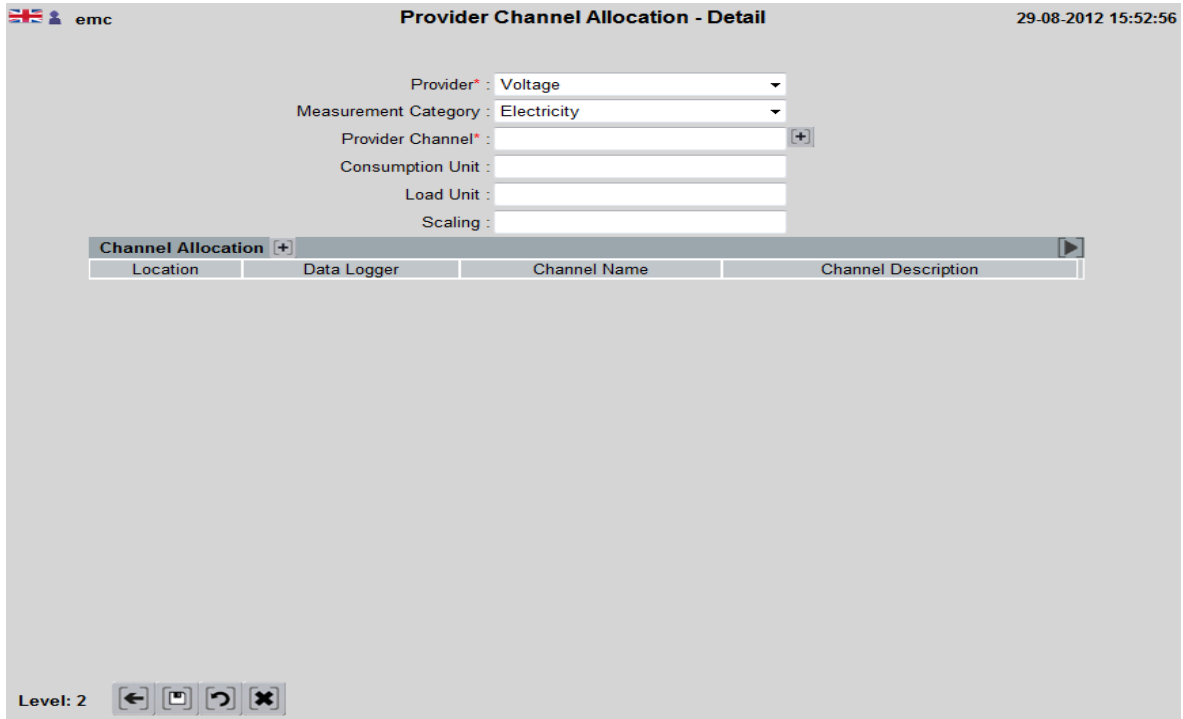
Properties :

- Company :** Company Name
- Location :** Location name
- Summator/Data Logger :** Data logger name
- Provider :** Name of energy provider
- Measurement Category :** Energy type of provider channel
- Provider Channel :** Channel name of the supplier (main meter)
- Company :** Company
- Location :** Location
- Summator/Data Logger :** Summator/Data Logger
- Measurement Category :** Measurement Category

PROVIDER CHANNEL ALLOCATION - DETAIL

This screen shows all the channels (sub-meter), which were already the supplier channel (associated with the main counter)

By clicking on the + button, additional channels (sub-meter) are added. By clicking on the X button, channels can (sub-meter) be deleted



emc **Provider Channel Allocation - Detail** 29-08-2012 15:52:56

Provider* : Voltage
Measurement Category : Electricity
Provider Channel* : +
Consumption Unit :
Load Unit :
Scaling :

Channel Allocation +

Location	Data Logger	Channel Name	Channel Description
----------	-------------	--------------	---------------------

Level: 2 [←] [→] [↺] [✕]

Properties :

Provider :	Name of energy supplier
Measurement Category :	Energy type of supplier channel
Provider Channel :	Channel name of the supplier (main meter)
Consumption Unit :	Unit for consumption, e.g. kWh
Load Unit :	Unit for the load, e.g. kW
Scaling :	Scaling
Channel Allocation :	This screen displays all channels (sub-counter), which have not yet associated with a supplier channel. Single or multiple channels can be select.

HOLIDAY

HOLIDAY OVERVIEW

This overview shows all defined holidays in a company / the associated location.

A green dot indicates that in this month holidays are available. Putting the mouse cursor on the green dot, Holidays are shown as a tooltip
Double-click in the line leading to the detail screen, where holidays can be added or deleted.


Company ↑	Location	Year	January	February	March	April	May	June	July	August	September	October	November	December
GMC-Germany	Hamburg	2012	--	--	--	--	●	●	--	--	●	--	--	--
GMC-Germany	Hamburg	2013	●	--	●	--	--	--	--	●	--	--	--	●

Properties :

Comapny :	Name of company
Location :	Name of the location within the company
Location :	Name of the location within the company
Year :	Year for which the holidays are displayed.
January :	If Green Dot there are holidays in this month else no holidays.
March :	If Green Dot there are holidays in this month else no holidays.
April :	If Green Dot there are holidays in this month else no holidays.
May :	If Green Dot there are holidays in this month else no holidays.
June :	If Green Dot there are holidays in this month else no holidays.
July :	If Green Dot there are holidays in this month else no holidays.
September :	If Green Dot there are holidays in this month else no holidays.
October :	If Green Dot there are holidays in this month else no holidays.
November :	If Green Dot there are holidays in this month else no holidays.
December :	If Green Dot there are holidays in this month else no holidays.

HOLIDAYS - DETAIL

In this screen, the user defines the holidays for one year.
Where the firm has offices in different states or in different countries, the holidays can be defined separately for each location.

 admin
Holidays - Detail
03-04-2013 18:38:02

Company* :


Location* :

Year :

January 2012							February 2012							March 2012							April 2012							May 2012							June 2012															
Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su									
					1			1	2	3	4	5			1	2	3	4					1	2	3		1	2	3	4	5	6						1	2							1	2	3		
2	3	4	5	6	7	8	6	7	8	9	10	11	12	5	6	7	8	9	10	11	2	3	4	5	6	7	8	7	8	9	10	11	12	13	4	5	6	7	8	9	10									
9	10	11	12	13	14	15	13	14	15	16	17	18	19	12	13	14	15	16	17	18	9	10	11	12	13	14	15	14	15	16	17	18	19	20	11	12	13	14	15	16	17									
16	17	18	19	20	21	22	20	21	22	23	24	25	26	19	20	21	22	23	24	25	16	17	18	19	20	21	22	21	22	23	24	25	26	27	18	19	20	21	22	23	24									
23	24	25	26	27	28	29	27	28	29				26	27	28	29	30	31	23	24	25	26	27	28	29	28	29	30	31				25	26	27	28	29	30												
30	31																		30																															

July 2012							August 2012							September 2012							October 2012							November 2012							December 2012														
Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su								
					1			1	2	3	4	5			1	2				1	2	3	4	5	6	7		1	2	3	4									1	2								
2	3	4	5	6	7	8	6	7	8	9	10	11	12	3	4	5	6	7	8	9	8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9								
9	10	11	12	13	14	15	13	14	15	16	17	18	19	10	11	12	13	14	15	16	15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16								
16	17	18	19	20	21	22	20	21	22	23	24	25	26	17	18	19	20	21	22	23	22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23								
23	24	25	26	27	28	29	27	28	29	30	31	24	25	26	27	28	29	30	29	30	31					26	27	28	29	30			24	25	26	27	28	29	30										
30	31																																31																

Level: 2



Created By - admin, 19-09-2012 11:03:34

Modified By - admin, 19-12-2012 12:27:28

Properties :

- Company :** Name of company
- Location :** Name of the location within the company.
- Year :** Year

TARIFF PLAN

TARIFF PLAN OVERVIEW

This rate is the generic term for the tariffs that can be defined for each vendor.

emc **Tariff Plan - Overview** 29-08-2012 15:53:57

Provider: All

Provider↑	Name	Valid From	Status
Strom	Tariff 1	01-01-2012	✓

Level: 1 [Navigation icons] [Search bar] All [Filter icon] 1 [Page navigation icons] 1 - 1(1) [Print icon]

Properties :

Provider :	Name of the energy suppliers
Name :	Name of the Tariff Plans
Valid From :	The date from which the tariff is valid.
Status :	The status indicates whether a tariff is defined completely and accurately and can be used with it or not.
Provider :	Name of the energy suppliers

TARIFF PLAN - DETAIL

In this screen, a collective is defined in detail.

- Tariff Iframe detail:

Here the prices for the individual rates are defined as Day or night fare.

Holiday Iframe:

Here holidays are assigned to a tariff.

- Extra Charges Iframe:

Here are additional charges, for example Current taxes defined

Properties :

- Copy From :** Here a Tariff will be selected to serve as a template for a new tariff (simplified input).
- Name :** Collective name, any name
- Description :** Description, any text
- Measurement Category :** Selection of energy types
- Provider Channel :** Select the main input meter from suppliers
- Consumption Unit :** Unit for consumption, eg Wh (watt-hours)
- Load Unit :** Unit for the load profile as W (watts)
- Scaling :** Scaling, e.g. K for Kilo
- Invoicing :** Selection, e.g. monthly
- Rounding :** UP
Rounding means if time of consumption is 0930 ? 1330 then up rounding will apply tariff applicable from 1000 Hrs to 1400 Hrs.

Down
Rounding would mean opposite of up rounding meaning for consumption from 0930 to 1330 rate applicable will be based on 0900 to 1300 Hrs.
- Currency Unit :** E.G. euro
- Valid From :** This tariff is valid from this date
- Tariff Details :** Here the prices for the individual rates are defined as Day or night fare.
- Holiday Allocation :** Here holidays are assigned to a tariff.
- Extra Charges :** Here are additional charges, for example Current taxes defined

PLANNING

PLANNING OVERVIEW

Here all information about planning you can see.

emc **Planning - Overview** 29-08-2012 15:55:47

Measurement Category	Company	Name	Applied From	Interval
Gas	GMCBS	Planning-S	01-05-2012	15 Minutes
Electricity	GMCBS	Planning Strom	01-05-2012	15 Minutes

Level: 1 [Navigation icons] [Filter: All] [Page: 1 / 1 - 2(2)]

Properties :

- Measurement Category :** Select the Energy Type
- Name :** Name of the planning
- Interval :** Interval Type:
 - 1) 5 Minutes
 - 2) 15 Minutes
 - 3) Hourly
 - 4) Daily
 - 5) Monthly

PLANNING - DETAIL

On this screen you can enter plan data. This screen reduces effort of planning again and again. You can plan data for 1 complete year. Having chosen the provider, the tariff for planned power will become applicable.

emc
Planning - Detail
29-08-2012 15:56:27

Measurement Category :

Company* :

Name* :

Consumption Unit :

Load Unit :

Scaling :

Maximum Load (%)* :

Minimum Load (%)* :

Interval :

Applied From* :

Plan Pattern Value
+

▶

Mon	Tue	Wed	Thu	Fri	Sat	Sun	Start Date	End Date	Edit

Level: 2

Properties :

- Measurement Category :** Select name of the Energy Type
- Name :** Name of plan
- Consumption Unit :** Consumption Unit
- Load Unit :** Load Unit
- Scaling :** Scaling
- Maximum Load (%) :** Maximum of load value
- Minimum Load (%) :** Minimum of load value
- Interval :** Interval Type:
1) 5 Minutes
2) 15 Minutes
3) Hourly
- Applied From :** Planning will be applied up to that Date.
- Plan Pattern Value :** Plan daily pattern value
- Plan Pattern Value :** Plan monthly pattern value
- Channel Allocation :** Allocate channel

Schedule Data Output Interface Overview

Interface Name ↑	Interface Format
DO-1	CSV

Properties :

Interface Name : Interface Name
Interface Format : Interface Format

Data Output Interface

emc Data Output Interface - Detail 29-08-2012 15:58:32

Measurement Category : Location : Channel : Electro Parameter :

Electricity Strom st-sc-25 [St-SC-25]
 Gas Gas st-sc-26 [St-SC-26]
 Water Wasser St-SC-27 [St-SC-27]
 Heat A230
 Temperature(°C) Lo-1

Company : Summator/Data Logger :

GMCß SC-DL1
 CB DL-SU1
 CBG Test_DL
 Co-4 RealTime
 Co-5 sample

Interface Name* :
 Interface Format : Database CSV Text
 Storage Days :

Level: 2

Properties :

Measurement Category :	Measurement Category
Company :	Company
Location :	Location
Summator/Data Logger :	Data Logger
Channel :	Channel
Electro Parameter :	Electro Parameter
Interface Name :	Interface Name
Interface Format :	Interface Format
Value Seprator :	Value Seprator
Action Type :	Action Type
Storage Days :	Storage Days
Separate File :	Separate File
File On :	File On
EMC Server Drive :	EMC Server Drive
Folder Path :	Folder Path
File Name :	File Name
Start Date :	Start Date
End Date :	End Date

ACTION STATUS

ACTION STATUS OVERVIEW

This screen gives the user an overview over the course of the past, guided by background processes. The user can see at a glance whether any recent actions have been carried out correctly or whether errors have occurred. This screen simplifies troubleshooting.

See also "log files", where all past actions are included.

Included Actions:

- 1) Reads the consumption data (data logger, and CSV files)
- 2) Scheduled Reports
- 3) Recently backups

Enable		Force	Company	Location	ActionType	Action On	Last Scheduled	Record Up To	Status	Frequency	Future Scheduled
			GMC-Germany	Hamburg	Read Datalogger	SU-DL1	--	07-11-2012 10:58:50	--	Every@ 00:15	--
			GMC-Germany	Hamburg	Read Datalogger	TestSL	--	14-03-2013 19:40:38	--	Every@ 00:15	--
			--	--	Schedule Report	Test-Mail	--	13-01-2013 16:31:47	--	Every@ 01:00	--
			GMC-Germany	Hamburg	Read Datalogger	SC-DL1	07-11-2012 11:45:00	07-11-2012 11:45:00		Every@ 00:15	07-11-2012 12:00:00
			CB	Nürnberg	Read Datalogger	DL-SC1	07-11-2012 11:45:00	07-11-2012 11:45:00		Every@ 00:15	07-11-2012 12:00:00
			--	--	Schedule Report	TC-1	19-11-2012 10:45:00	19-11-2012 10:50:00		Every@ 01:00	19-11-2012 10:50:00
			--	--	Schedule Report	Tc Test	28-11-2012 11:50:00	28-11-2012 11:30:00		Every@ 01:00	28-11-2012 11:55:00

Properties :

Enable :	<p>v = action is on (Action will be carried out as planned) X = action is disabled (Action is not carried out in the next scheduled start)</p> <p>The action is enabled by default. With a click in the icon, the process can be turned on and off.</p>
Force :	<p>This button opens a window, with the re-reading of a data logger can be enforced(Only for data logger).</p>
Company :	Company
Location :	Location
Action On :	Name of the data logger or the report
Last Scheduled :	Last execution date and time of last action
Record Up To :	The date and time of the last processed data
Status :	<p>Provides information about the success of the action Green: Action was successful Yellow: Read-holes (for data logger) Red: There were errors. Clicking on the status icon displays details of this action</p> <p>Yellow Indicates that reading operation is in process. Red image Indicates that last reading operation was not successful.</p> <p>Also it must be noted that these signals also are link to detailed log information. This information can be seen in a new window that pops-up on clicking status signal.</p>
Frequency :	Indicates how often the action is performed, e.g. "All @ 00:15" = every 15 minutes
Future Scheduled :	The next scheduled start
Action Type :	Action Type

LOG INFORMATION

LOG INFORMATION OVERVIEW

This screen shows all the actions that were performed in the past with the respective status. The log information will be stored for fixed number of days in accordance with the EMC system settings. After reaching the storage day the oldest log information is cleared.

The number of storage days can change by the user. However, it should be noted that an increase in storage days required more disk space. The default setting is 30, i.e. Log files that are older than 30 days will be deleted

admin		Log Information						03-04-2013 18:43:46	
Company All		Action Type All							
Location All									
Action Type	Company	Location	ActionOn	Executed Time↓	Scheduled Time	Read Up To	Status	Reconnection	
Read Datalogger	GMC-Germany	Hamburg	SC-DL1	02.11.12 19:45:00	02.11.12 19:45:00	02.11.12 19:45:00		0	
Read Datalogger	GMC-Germany	Hamburg	SC-DL1	02.11.12 19:30:00	02.11.12 19:30:00	02.11.12 19:30:00		0	
Read Datalogger	GMC-Germany	Hamburg	SC-DL1	02.11.12 19:20:12	02.11.12 19:30:00	02.11.12 19:30:00		0	
Read Datalogger	GMC-Germany	Hamburg	SC-DL1	02.11.12 19:15:00	02.11.12 19:15:00	02.11.12 19:15:00		0	
Read Datalogger	GMC-Germany	Hamburg	SC-DL1	02.11.12 19:00:00	02.11.12 19:00:00	02.11.12 19:00:00		0	
Read Datalogger	GMC-Germany	Hamburg	SC-DL1	02.11.12 18:45:00	02.11.12 18:45:00	02.11.12 18:45:00		0	
Read Datalogger	GMC-Germany	Hamburg	SC-DL1	02.11.12 18:30:00	02.11.12 18:30:00	02.11.12 18:30:00		0	
Read Datalogger	GMC-Germany	Hamburg	SC-DL1	02.11.12 18:15:00	02.11.12 18:15:00	02.11.12 18:15:00		0	
Read Datalogger	GMC-Germany	Hamburg	SC-DL1	02.11.12 18:00:00	02.11.12 18:00:00	02.11.12 18:00:00		0	
Read Datalogger	GMC-Germany	Hamburg	SC-DL1	02.11.12 17:45:00	02.11.12 17:45:00	02.11.12 17:45:00		0	
Read Datalogger	GMC-Germany	Hamburg	SC-DL1	02.11.12 17:30:00	02.11.12 17:30:00	02.11.12 17:30:00		0	
Read Datalogger	GMC-Germany	Hamburg	SC-DL1	02.11.12 17:23:16	02.11.12 17:23:00	02.11.12 17:15:00		0	
Read Datalogger	GMC-Germany	Hamburg	SC-DL1	02.11.12 17:15:00	02.11.12 17:15:00	02.11.12 15:00:00		0	
Read Datalogger	GMC-Germany	Hamburg	SC-DL1	02.11.12 17:13:12	02.11.12 17:13:00	02.11.12 15:00:00		0	
Read Datalogger	GMC-Germany	Hamburg	SC-DL1	02.11.12 17:00:01	02.11.12 17:00:00	02.11.12 15:00:00		0	

Properties :

- Action Type :** Gives information about the action, e.g. "Read data logger", "backup"
- Company :** Company
- Location :** Location
- ActionOn :** Name of the data logger or the report
- Executed Time :** Implementation date and time of last action
- Scheduled Time :** Last execution date and time of last action
- Status :** Provides information about the success of the action
 Green: Action was successful
 Yellow: Read-holes (for data logger)
 Red: There were errors. Clicking on the status icon displays details of this action
- Reconnection :** Indicates how many repetitions during connection establishment were needed to reach the unit. Normally = "0".
- Company :** Company
- Location :** Location
- Action Type :** Action Type

MANUAL INPUT

In certain cases it may be necessary to correct consumption values, e.g. exchange at a counter. This can be carried out using this screen.

According to the assignment of a channel to its data logger, 5 or 15 minute values are recorded in the table. After selecting a channel, the stored values are displayed and can be overwritten

admin
Manual Input Detail
03-04-2013 18:45:25

Measurement: Electricity

Category:

Company: GMC-Germany

Location: Hamburg

Summator/Data Logger: SC-DL1

Channel: St-SC-25 [St-SC-25]

Electro Parameter: --Select--

Input Via: Manual CSV

Date: 3-04-2013

Reading Interval: 15

Hour	00:15	00:30	00:45	00:60
0	0	0	0	0
1	0	0	0	0
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	0	0	0	0
8	0	0	0	0
9	0	0	0	0
10	0	0	0	0
11	0	0	0	0
12	0	0	0	0
13	0	0	0	0
..	0	0	0	0

Level: 1

←
↺
↻

Properties :

- Measurement Category :** Choose a energy type
- Company :** Choose a Company
- Location :** Choose a location
- Summator/Data Logger :** Select a data logger
- Channel :** Select a channel
- Electro Parameter :** In prepration
- Input Via :** Manual: Input via the screen table
CSV: Input from a CSV file
- Date :** Choose a date
- Reading Interval :** Appears automatically
- File :** CSV to be included

XLS UPLOAD FOR CHANNEL CALCULATION

XLS UPLOAD FOR CHANNEL CALCULATION OVERVIEW

This feature allows an Excel file to be passed to EMC in which any calculations can be performed by the user. Complicated calculations are supported, for example, Required calculation in cost center accounting can be done.

There are separate files for different reading cycles, eg 15-minute reading and for monthly.

This Excel file is executed after each read operation.

This Excel file consists of 3 sections:

- 1) Input range of EMC to Excel
This defines the user channel name that will make EMC the Excel file may have.
This area is then filled with the current read channel values.
- 2) Output range from Excel to EMC
Here the user defined channel names whose values are to be acquired by EMC are stored
- 3) User Workspace
In this area, the user can perform arbitrary computations. The user gets its values from the input area, and stores the results in the output area.

The overview screen shows all previously uploaded Excel files. You can only have one file for each reading interval.

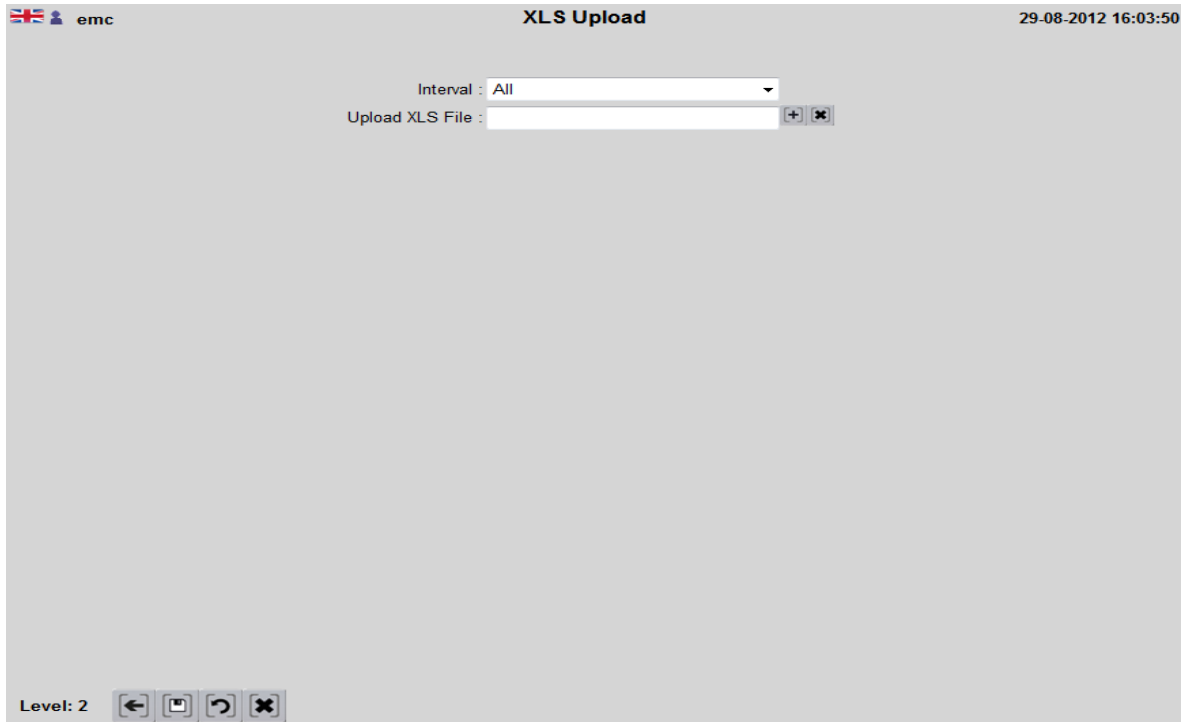
XLS File Name ↑	Interval
CostCenter_amit.xls	All

Properties :

XLS File Name : File name of the Excel file, that EMC will use
Interval : Reading interval

XLS UPLOAD

With this screen, one Excel file is transferred to EMC. With the "+" button, the Excel file is selected by the user's PC.



The screenshot shows a web application window titled "XLS Upload". The user is identified as "emc" and the timestamp is "29-08-2012 16:03:50". The main area contains an "Interval" dropdown menu currently set to "All". Below it is a text input field labeled "Upload XLS File:" followed by a "+" button and a close icon. At the bottom left, there is a "Level: 2" label and a set of navigation icons (back, forward, refresh, close).

Properties :

Interval :	Reading Interval when the Excel file to be executed
Upload XLS File :	File name of the Excel file

DOWNLOAD SUPPORT FILE

Support files contain all relevant information to EMC installation that is required in case of error, to give to the manufacturer to be able to give support

In the event of an error, please send these files to support the failure of the manufacturer of your contact, with a detailed description

The support files are stored on the EMC server. The user is prompted to select a directory.

emc **Download Support File** 29-08-2012 16:04:31

Download Logs Data

Start Date :

< August >							< 2012 >						
Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su
		1	2	3	4	5			1	2	3	4	5
6	7	8	9	10	11	12	6	7	8	9	10	11	12
13	14	15	16	17	18	19	13	14	15	16	17	18	19
20	21	22	23	24	25	26	20	21	22	23	24	25	26
27	28	29	30	31			27	28	29	30	31		

End Date :

< August >							< 2012 >						
Mo	Tu	We	Th	Fr	Sa	Su	Mo	Tu	We	Th	Fr	Sa	Su
		1	2	3	4	5			1	2	3	4	5
6	7	8	9	10	11	12	6	7	8	9	10	11	12
13	14	15	16	17	18	19	13	14	15	16	17	18	19
20	21	22	23	24	25	26	20	21	22	23	24	25	26
27	28	29	30	31			27	28	29	30	31		

Level: 1

Properties :

Download : Logs: Create the log files
Data: Create the data files

Start Date : For copying the consumption data

End Date : For copying the consumption data

DEFINITION USER GROUPS

DEFINITION USER GROUPS OVERVIEW

In EMC, the user's rights to the User groups can be defined. Individual users are then assigned to the user groups. Users will receive all the rights of the associated user group.

This overview screen shows all defined user groups.

Admin has always full privileges for all screens.

Group Name ↑	Project Name
EMC	Energy Management Control
GUEST	Energy Management Control

Properties :

Group Name :	User Group Name
Project Name :	This column displays the Project Name.
List Users :	List Users to whom group is allocated
Application :	Name of the Application

USER GROUP DETAILS

In this screen, the access rights for a user group can be defined.

emc
User Group Details
29-08-2012 16:07

Name
↑ ↓

Project
Energy Management C

Screen Name ↑ 1	Screen Type	No Access	View	Modify	Add/Delete	Lock/Unlock	Release
Action Status	OVERVIEW	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	--	--
Application Properties - Overview	OVERVIEW	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	--	--
Backup - Overview	OVERVIEW	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	--	--
Channel - Overview	OVERVIEW	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	--	--
Company - Overview	OVERVIEW	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	--	--
Company Graph	OVERVIEW	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	--	--
Company RealTime Graph	OVERVIEW	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	--	--
Company Report	OVERVIEW	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	--	--
Consortium - Detail	Detail	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	--	--
Content Right Groups - Overview	OVERVIEW	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	--	--
Cost Center - Overview	OVERVIEW	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	--	--
Cost Center Structure	OVERVIEW	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	--	--
Customize Screen Labels - Overview	OVERVIEW	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	--	--
Data Output Interface - Overview	OVERVIEW	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	--	--
Definition User Groups - Overview	OVERVIEW	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	--	--
Demo Data	Detail	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	--	--
Download Support File	Detail	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	--	--
Easy Installation	Detail	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	--	--
Electro Parameter - Overview	OVERVIEW	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	--	--
Historical Graph	Detail	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	--	--
Historical Report	Detail	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	--	--

Level: 2

← ↺ ↻ ✖ ⌂

Properties :

- Screen Name :** Name of the screen where such rights to apply
- Screen Type :** Type of the screen (overview screen or detail screen)
- No Access :** Users of this groups can not access this screen.
- View :** User of this group can view this screen
- Modify :** Users of this group can modify data content
- Add/Delete :** Users of this group can create and delete records
- Lock/Unlock :** Not Implemented
- Release :** Not Implemented
- Project :** Project name

CONTENT RIGHT GROUPS

CONTENT RIGHT GROUPS OVERVIEW

This screen allows content permissions.

E.G. A group of users get rights to access only certain channels or datalogger, then the group of users maintain access to the channel screen, but user can only select your defined channels and view them according to their access rights.

Group Name↑	Application
Demo-Rights	Energy Management Control
Guest Content Rights	Energy Management Control
Test	Energy Management Control

Properties :

- Group Name :** Group name for substantive rights.
- Application :** Application

CONTENT RIGHT GROUPS - DETAIL

On this screen, the contents are defined that can be accessed by a group of users.

admin
Content Right Groups - Detail
04-04-2013 09:31:13

Group Name* :

Application :

Measurement Category* :	Location* :	Channel* :	Cost Center :
<input type="checkbox"/> Electricity <input type="checkbox"/> Gas <input type="checkbox"/> Water	<input type="checkbox"/> Hamburg <input type="checkbox"/> Nürnberg <input type="checkbox"/> Berlin	<input type="checkbox"/> St-SC-25[St-SC-25] <input type="checkbox"/> St-SC-26[St-SC-26] <input type="checkbox"/> St-SC-27[St-SC-27] <input type="checkbox"/> St-SC-28[St-SC-28]	<input type="checkbox"/> ABT1 <input type="checkbox"/> KST-1 <input type="checkbox"/> ABT2 <input type="checkbox"/> ABT- KST
Company* :	Summator/Data Logger* :	Virtual Channel :	
<input type="checkbox"/> GMC-Germany <input type="checkbox"/> CB <input type="checkbox"/> CBG	<input type="checkbox"/> SC-DL1 <input type="checkbox"/> DL-SC1 <input type="checkbox"/> SU-DL1 <input type="checkbox"/> TestSL	<input type="checkbox"/> VC-Test <input type="checkbox"/> KST-1	

Level: 2

Created By - emc, 11-12-2012 18:43:09

Properties :

- | | |
|-------------------------------|---------------------------------------------------------------------|
| Group Name : | Group Name |
| Application : | Application |
| Measurement Category : | Select one or more types of energy that user group can access |
| Company : | Select one or more companies that user group can access. |
| Location : | Select one or more locations that user group can access. |
| Summator/Data Logger : | Select one or more data logger that user group can access |
| Channel : | Select one or more channels that group of users can access |
| Virtual Channel : | Select one or more virtual channels that user group can access |
| Cost Center : | Select one or more types of cost center that user group can access. |

USERS

USERS OVERVIEW

This screen displays the existing users and the selection provided.

The screenshot shows a web interface titled "User - Overview" with a timestamp of "29-08-2012 16:10:04". The user "emc" is logged in. A "Project" dropdown menu is set to "All". Below this is a table with the following data:

User Photo	User Name	Login Id ↑	Login History
	EMC	emc	29-08-2012 00:00:00
	guest	guest	29-06-2012 00:00:00

At the bottom of the interface, there are navigation controls including "Level: 1", a set of arrows, a search bar containing "All", and pagination information "1 - 2(2)".

Properties :

User Photo :	User Photo
User Name :	Having a name of the user which is created.
Login Id :	It is a id through which user can login in the selected project.
Application :	Application
Project :	This column displays the Project Name.
Login History :	Login Date inform that last time user will be login up to that date

USER - DETAIL

With this screen, the user is defined by assignment of group rights and substantive rights, which the user can run in EMC.

User Groups:

Here, the user is assigned to the user groups

Content rights:

Here the content rights are assigned to users

The screenshot shows the 'User - Detail' form in the EMC interface. The form is titled 'User - Detail' and includes the following fields:

- User Name* :
- Login Id* :
- Password* :
- Retype Password* :
- Email* :
- Telephone No. :
- Language* :

There is a 'User Photo' section with a photo upload icon and a small square icon.

Below the form is a 'User Groups' table with the following columns:

User Group Name	Group Type
-----------------	------------

The interface also shows a user named 'emc' and the date '29-08-2012 16:10:45'. Navigation buttons are visible at the bottom left.

Properties :

User Name :	Name of the user
Login Id :	Login Id, with this name usr can login to the EMC
Password :	assword, associated password for Login ID
Retype Password :	Repeat the password
Change Password :	Enter a new password
Email :	Email address of the user
Telephone No. :	Telephone No. of the User
Language :	Default language for the user
Application :	Application
User Photo :	Here is a photo uploaded by the users
isActive :	Allows authorized user to activate or deactivate the user already created.
User Group List :	Displays list of user groups assign to this user.
Location :	Specify whether the user may add locations and/or may remove or change data. One can also adjust that the user can only read data read however not change it
Area :	Area
User Contain :	User Contain

LICENSE DETAILS

Licensing

emc License Details 29-08-2012 16:11:30

<p>Consortium Name : <input type="text" value="GMC Italy"/></p> <p>Street : <input type="text" value="Via Romagna, 4"/></p> <p>Country Code : <input type="text" value="I"/></p> <p>ZIP : <input type="text" value="20853"/></p> <p>Town : <input type="text" value="Biassono MB"/></p> <p>Tax No : <input type="text" value="1234"/></p> <p>Expiry Date : <input type="text" value="2099-12-31"/></p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th colspan="4">License Summary</th> </tr> <tr> <th>Feature Name</th> <th>No of Records</th> <th>Used Records</th> <th>Remaining Records</th> </tr> </thead> <tbody> <tr> <td>Company</td> <td>5</td> <td>5</td> <td>0</td> </tr> <tr> <td>Location</td> <td>99999</td> <td>11</td> <td>99988</td> </tr> <tr> <td>Datalogger</td> <td>99999</td> <td>17</td> <td>99982</td> </tr> <tr> <td>Channel</td> <td>99999</td> <td>33</td> <td>99966</td> </tr> <tr> <td>Virtual Channel</td> <td>99999</td> <td>9</td> <td>99990</td> </tr> <tr> <td>Energy</td> <td>99999</td> <td>11</td> <td>99988</td> </tr> <tr> <td>Users</td> <td>99999</td> <td>10</td> <td>99989</td> </tr> </tbody> </table>	License Summary				Feature Name	No of Records	Used Records	Remaining Records	Company	5	5	0	Location	99999	11	99988	Datalogger	99999	17	99982	Channel	99999	33	99966	Virtual Channel	99999	9	99990	Energy	99999	11	99988	Users	99999	10	99989
License Summary																																					
Feature Name	No of Records	Used Records	Remaining Records																																		
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Virtual Channel	99999	9	99990																																		
Energy	99999	11	99988																																		
Users	99999	10	99989																																		

License Packages			
Date	No of Times	Package Name	Applicable
01-02-2012	1	Unlimited	5.0.0a

Level: 1

Properties :

Consortium Name :	Consortium Name
Street :	Street
Country Code :	Country Code
ZIP :	ZIP
Town :	Town
Tax No :	Tax No
Expiry Date :	Expiration date of license file

APPLICATION PROPERTIES

APPLICATION PROPERTIES OVERVIEW

This screen displays all of the settings that have been made for EMC installation.
By double clicking on a parameter, user can change these settings, if the user has the appropriate rights.

PropertyType ↑	Parameter Name	Parameter Description	Parameter Value
Application	Graph_Refresh_Interval	This interval is used for Graph Refresh. Please give value in second.	30

Properties :

PropertyType :	Application or Comserver
Parameter Name :	Parameter Name
Parameter Description :	Description, any text
Parameter Value :	Parameter Value
Property Type :	Property Type (Key Field)

APPLICATION PROPERTIES - DETAIL

With this screen, individual parameters can be viewed or modified. Changes should only be performed by experienced users, as this affects the way work of EMC.

Parameter Name :

Parameter Description :

User Group :
EMC
GUEST

Property Type : Application ComServer

Parameter Value +

Default	Value
---------	-------

Level: 2

Properties :

Parameter Name :	Name of the parameter
Parameter Description :	Description, any text
Parameter Description :	Description, any text
User Group :	This parameter is valid for this user group.
Application :	Not implemented for user.
Property Type :	Application (EMC) or Com Server
Parameter Value :	Parameter Value can specify here, Default Value can be chosen.

CUSTOMIZE SCREEN LABELS

CUSTOMIZE SCREEN LABELS OVERVIEW

User can change field names and headings in reports

Example: A company has several locations and wants the term "Location Name" instead of "Location". This can be done with this screen. This adjustment is carried out language-dependent.

emc **Customize Screen Labels - Overview** 29-08-2012 16:13:29

Language: All

Language Name↑	Actual Property Name	New Property Name
German	Cost Area	Department
German	Cost Area	Department

Level: 1 [Navigation icons] All [Search icon] 1 [Page navigation icons] 1 - 2(2) [Print icon]

Properties :

Language :	Language (Key Field)
Language Name :	Language name, e.g. "German"
Actual Property Name :	EMC standard field names, which should be replaced
New Property Name :	New field name that the user determines

CUSTOMIZE SCREEN LABELS - DETAIL

Here the language specific replacements are defined.

emc **Customize Screen Labels - Detail** 29-08-2012 16:14:18

Language : English

Actual Property Name :

New Property Name :

Level: 2

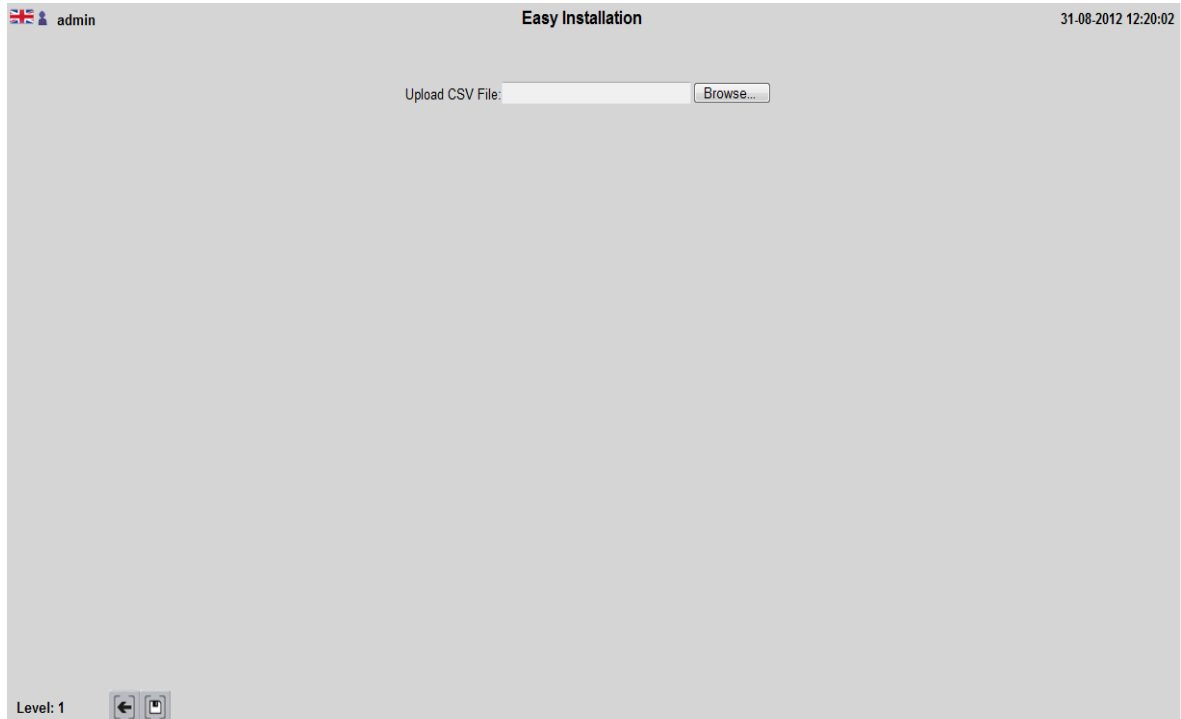
Properties :

Language :	Language in which the replacement is to be performed
Actual Property Name :	EMC standard field-name (to be replaced in the future)
New Property Name :	New user defined field name.

EASY INSTALLATION

With your setup (Easy installation), channels can be created in a simplified form.

The channels with their parameters are defined by the user in a CSV file and pass this at EMC screen. The CSV file has a fixed format.it can create channels and will be deleted.. See sample file in the Instalations CD.



The screenshot shows a web interface for 'Easy Installation'. At the top left, there is a user icon and the name 'admin'. The title 'Easy Installation' is centered at the top. On the top right, the date and time '31-08-2012 12:20:02' are displayed. The main area of the page is a large, empty grey rectangle. In the center of this area, there is a text input field with the label 'Upload CSV File:' and a 'Browse...' button to its right. At the bottom left of the page, there is a 'Level: 1' label and two small navigation icons (a left arrow and a right arrow).

Properties :

Easy Installation :

Enter the name (including the path) of the uploaded CSV file or file selection using the Browse button.

Easy Install Status :

Here list of channel name and its status can be view. If Green Dot : Channel is added successful else there is some error.

BACKUP APPLICATION

BACKUP APPLICATION OVERVIEW

The user can define one or more backups e.g. a daily backup at the EMC server and a weekly backup on another server / PC.

This screen shows all defined backups

The screenshot shows a web-based interface titled "Backup - Overview" with a user profile "emc" and a timestamp "29-08-2012 16:01:40". The main content is a table with the following data:

Backup Name↑	Backup Filepath	Schedule
Test	E:\Hiten\	@ 00:05

At the bottom of the interface, there is a navigation bar with "Level: 1", several navigation icons, a search box containing "All", and pagination controls showing "1" of "1 - 1(1)".

Properties :

- Backup Name :** User assigned name
- Backup Filepath :** Path where the backup is stored
- Schedule :** Schedule backups

In this screen, the details are set for the backup

The screenshot displays the 'Backup - Detail' configuration window. At the top left, there is a user profile icon and the name 'emc'. The title bar reads 'Backup - Detail' and the top right corner shows the date and time '29-08-2012 16:02:21'. The main area contains the following fields:

- Backup Name***: An empty text input field.
- Backup On**: Two radio buttons, with 'EMC Server' selected and 'Network' unselected.
- EMC Server Drive**: A dropdown menu currently showing 'C:\'.
- Folder Path**: A text input field containing 'C:\' with a folder selection icon to its right.
- Schedule**: A label with the text 'Schedule Not Defined' in red.

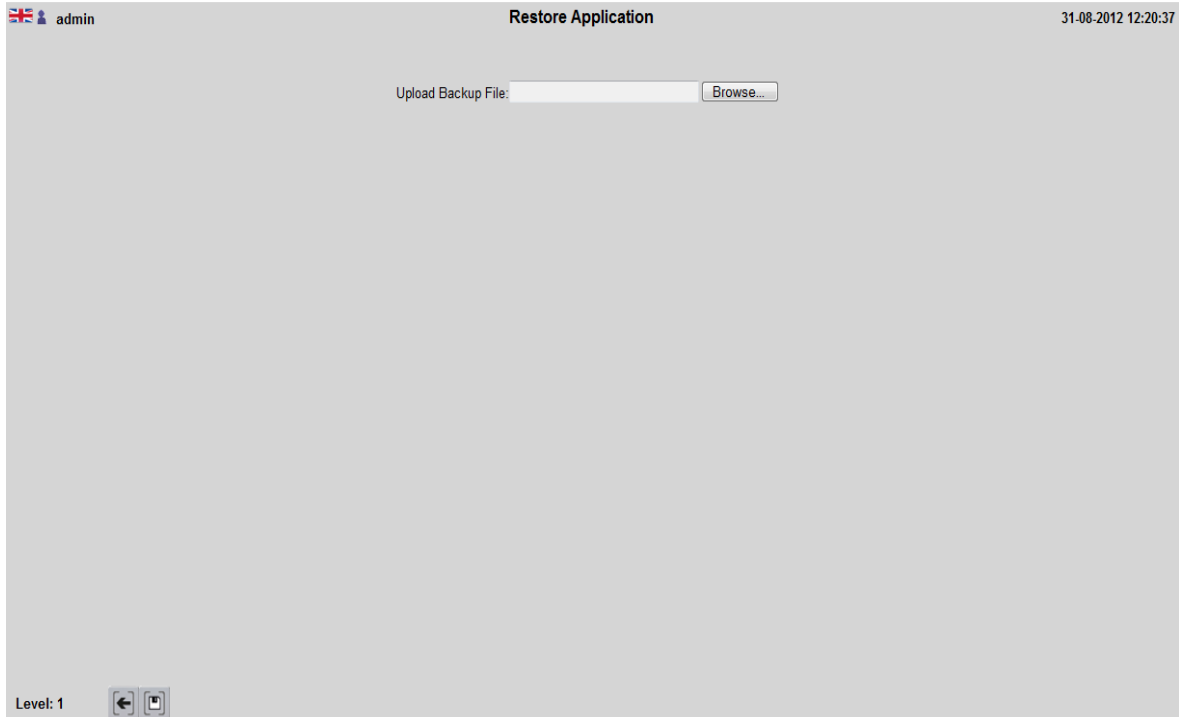
At the bottom left, it says 'Level: 2' followed by four navigation icons: back, home, refresh, and close.

Properties :

- Backup Name :** Name of the backup
- Backup On :** Server / PC on which the backup should be stored
 - a) EMC server
 - b) PC in the network
- EMC Server Drive :** Drive of EMC Server
- Folder Path :** Directory for the backup
- Schedule :** Here the user can define when the automatic report should be created. Click on the date to open the window to select the times.

RESTORE APPLICATION

With this screen previously saved data items can be reloaded back. All changes made since the backup rehearsed changes in EMC have to be done again. The reading from the previous time is saved automatically if the data in the data logger is present. Manual input files may need to be made available again. This function must be performed by experienced users.



Properties :

Restore :

Enter the file name, or select the Browse button.

Restore Status :

Here list of backup files and its status can be view. If Green Dot : Backup is successful else there is some error.