INSTRUCTION MANUAL

# WEBVIEW

## Web Server embedded in DIRIS G communication gateway

EN


www.socomec.com/
webview_software

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# EN CONTENTS

# 1. DOCUMENTATION

All documentation on the VERTELIS WEBVIEW is available on the SOCOMEC website at the following address:
http://www.socomec.com/webview_software

# 2. PRELIMINARY OPERATIONS

It is advisable to become thoroughly acquainted with the contents of this manual before using the VERTELIS WEBVIEW.

Here is the list of compatible browsers:
- Internet Explorer v9 and higher
- Firefox v24 and higher
- Chrome v30 and higher

We recommend using a screen with format 1280 x 900 pixels for optimum display legibility (reports and user interface).
The use of another screen format may cause changes in the display of certain zones.

# 3. INTRODUCTION

## 3.1. General introduction

The WEBVIEW software is part of the Vertelis application suite proposed by SOCOMEC. The Vertelis suite is composed of:
**VERTELIS WEBVIEW:** real time monitoring application
**VERTELIS HYPERVIEW:** energy management system

The WEBVIEW web server is embedded in DIRIS G gateways and allows the monitoring of the measurements of up to 32 devices of the DIRIS Digiware, DIRIS B-30, DIRIS A range of measurement systems, COUNTIS energy meters, and displays the energy consumption of the installation.
The user can access WEBVIEW via a web browser on a PC or a tablet.

## 3.2. Versions

There are two versions of the WEBVIEW software:

<table>
<tr><th>WEBVIEW</th><th>Function</th><th>Hosted on Gateway (32 devices max.)</th></tr>
<tr><td rowspan="2">Power Monitoring</td><td rowspan="2">Monitoring<br>• Real time measurements<br>• Alarms</td><td>DIRIS G-30</td></tr>
<tr><td>DIRIS G-40</td></tr>
<tr><td rowspan="2">Power & Energy Monitoring</td><td>Monitoring<br>• Real time measurements<br>• Alarms</td><td>DIRIS G-50</td></tr>
<tr><td>Analysis<br>• Measurement trends<br>• Consumptions</td><td>DIRIS G-60</td></tr>
</table>

# 4. STARTING

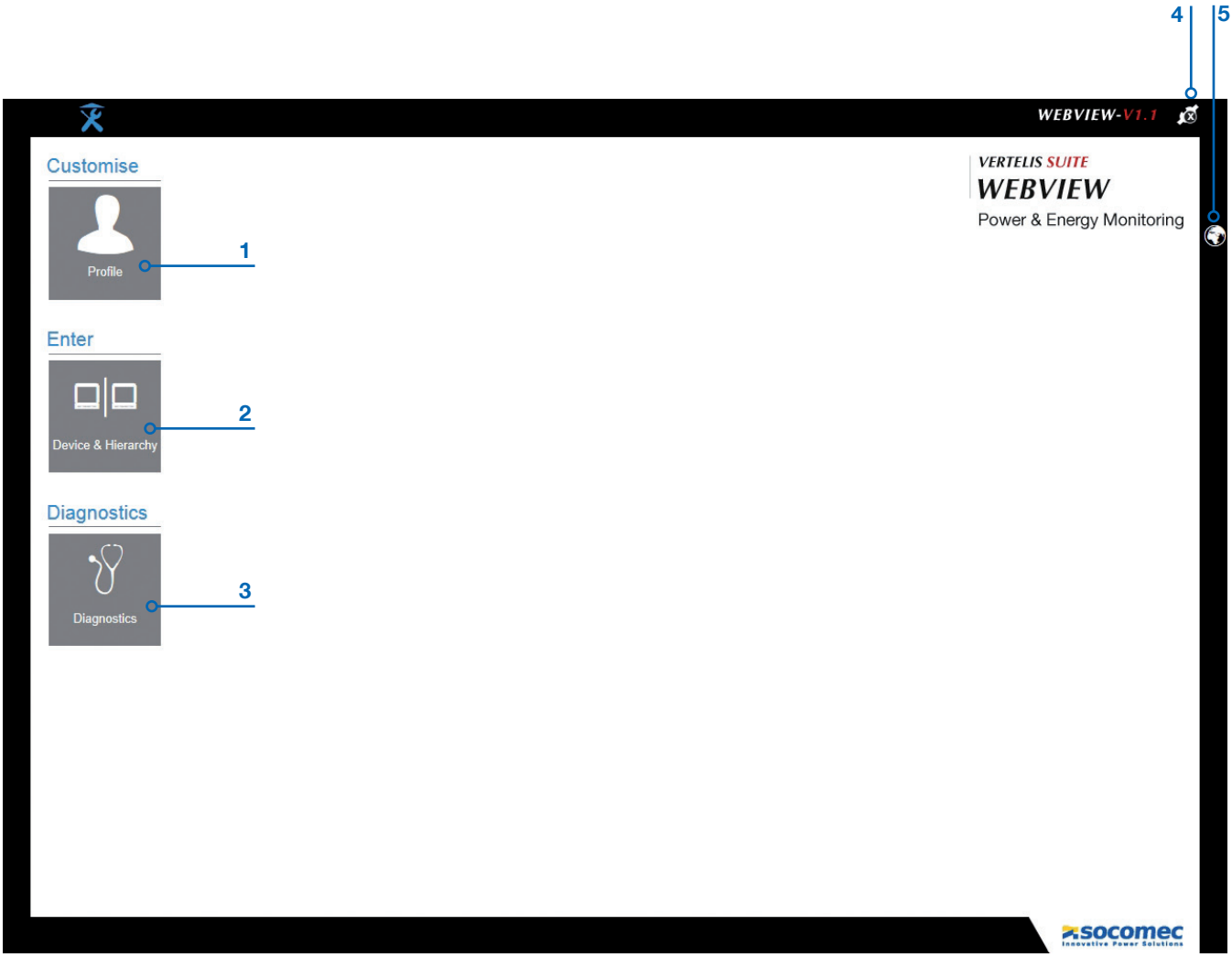
Like all Web applications, the WEBVIEW software needs an Ethernet connection to a local network.
Simply enter the URL of the DIRIS G gateway in the browser to access WEBVIEW.

The default IP address of the DIRIS G gateway is 192.168.0.2. This address can be modified using the configuration software Easy Config (see respective manual for more information).

# 5. CONFIGURATION

It is necessary to configure WEBVIEW to allow the most effective use of its functions.
The different operations possible are described in detail below.
Access to the configuration interface requires connection in Administrator mode (Admin).

## 5.1. Configuration home page




*1. Customization of the 'User' and 'Admin' profiles*
*2. Declaration of the devices and administration of hierarchy*
*3. Hardware and software diagnostic tool*
*4. Selecting the user profile*
*5. Selecting the language*

## 5.2. Selecting the user profile

There are three types of profiles:

- ‘User’ (default)
- 'Advanced User'
- ‘Admin’

Access to the 'User' profile is automatic and does not require a password.

The selection of the 'Advanced User' or 'Admin' profiles allows configuration to be carried out.
Important: If the system remains inactive for a few minutes (in 'Advanced User' or 'Admin' mode), it returns to the 'User' profile

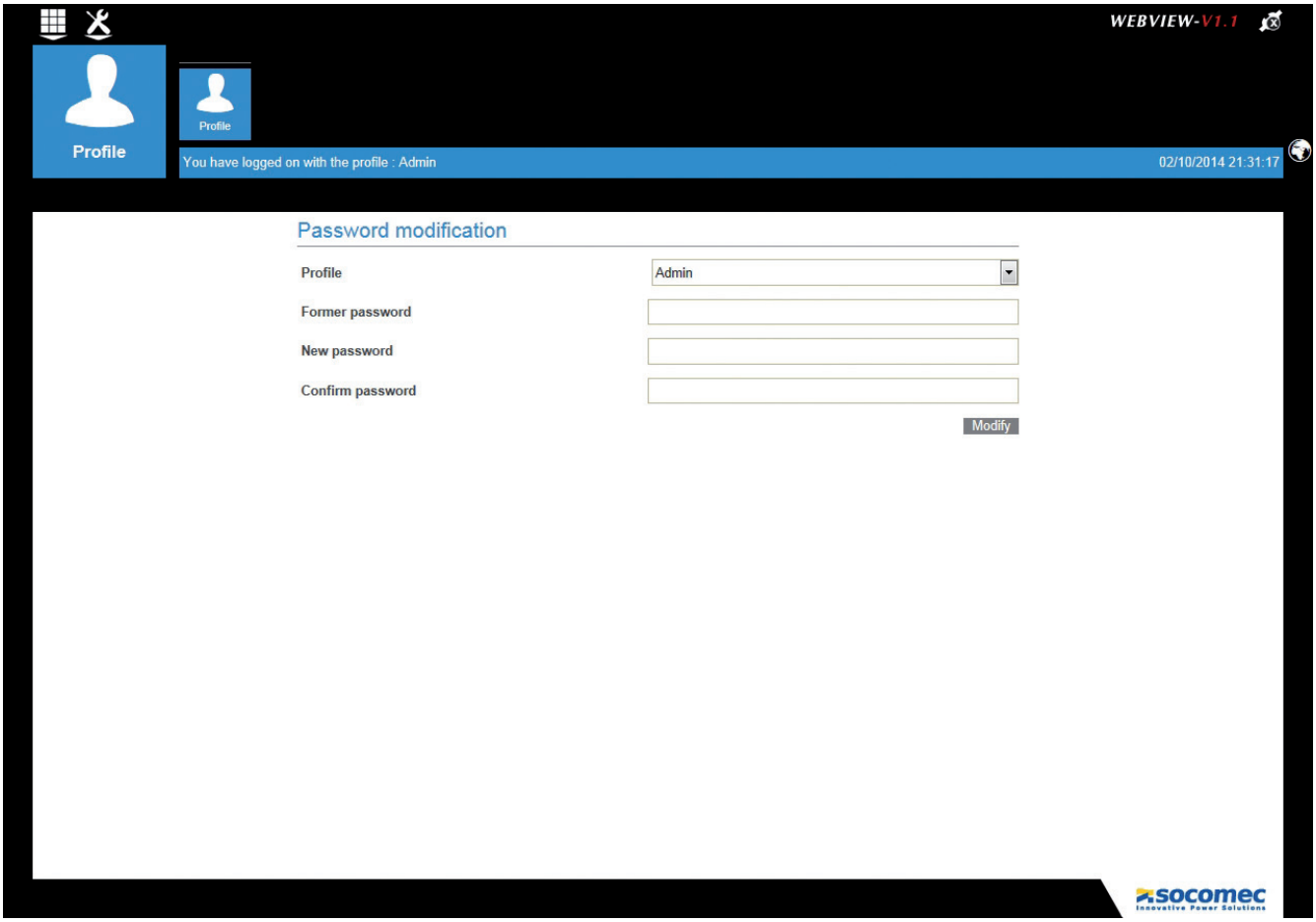
| | Monitoring | Analysis | Partial energy reset | Declaring/ Devices and Hierarchy | Diagnostics | Changing passwords | Default password |
|---|---|---|---|---|---|---|---|
| **User** | • | • | | | • | | no password |
| **Advanced User** | • | • | | • | • | Only Advanced User | UserAdvanced |
| **Administrator** | • | • | • | • | • | All | Admin |

NB: Take care to respect upper and lower case letters in the passwords.

## 5.3. Customising profiles

This function allows you to change the password of the Administrator profile.

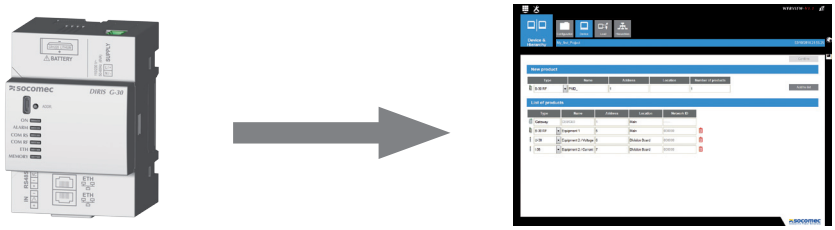
Just fill in the corresponding fields and confirm by clicking Modify.



## 5.4. Declaring/Devices and Hierarchy

**Important prerequisite:**
The "hardware" configuration of the gateway and of the connected devices must be done beforehand with the Easy Config software (see the DIRIS G & Easy Config documentation).

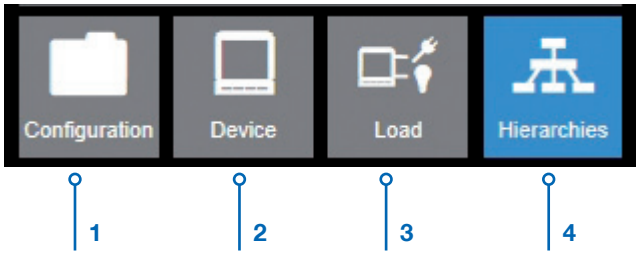
Once the operative gateway is accessible, the functional configuration of WEBVIEW can be implemented.



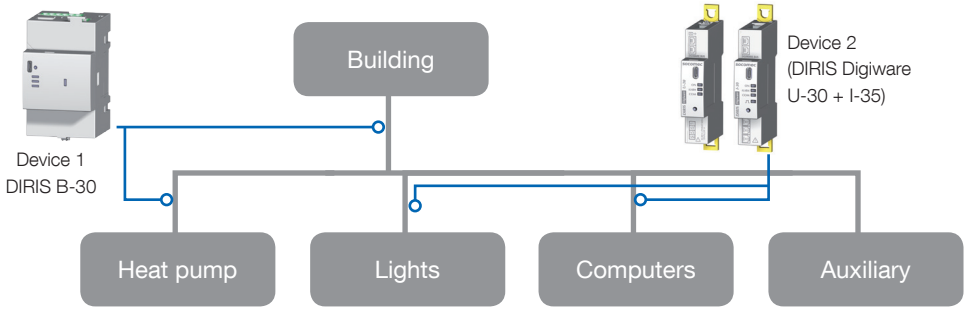
Hardware configuration with Easy Config (IP + Modbus Addressing)

Functional configuration with WEBVIEW (Products / Location / Hierarchy)

The function of declaring the devices and constructing the hierarchies relies on 4 indispensable steps to set the WEBVIEW correctly:
Configuration: creating (and saving) a configuration
Devices: setting of the devices
Load: description of the loads and association with the metering points supplied for each device
Hierarchies: hierarchical organisation of the metering points




The layout example shown above acts as a framework in the configuration of WEBVIEW on the following pages. This example described a firm that wants to analyse the electrical consumption of its Building and subdivide this consumption according to the different loads: Heat Pump, Lights, Computers and other Auxiliary loads.




4 electric energy flows of the building are measured using two devices.

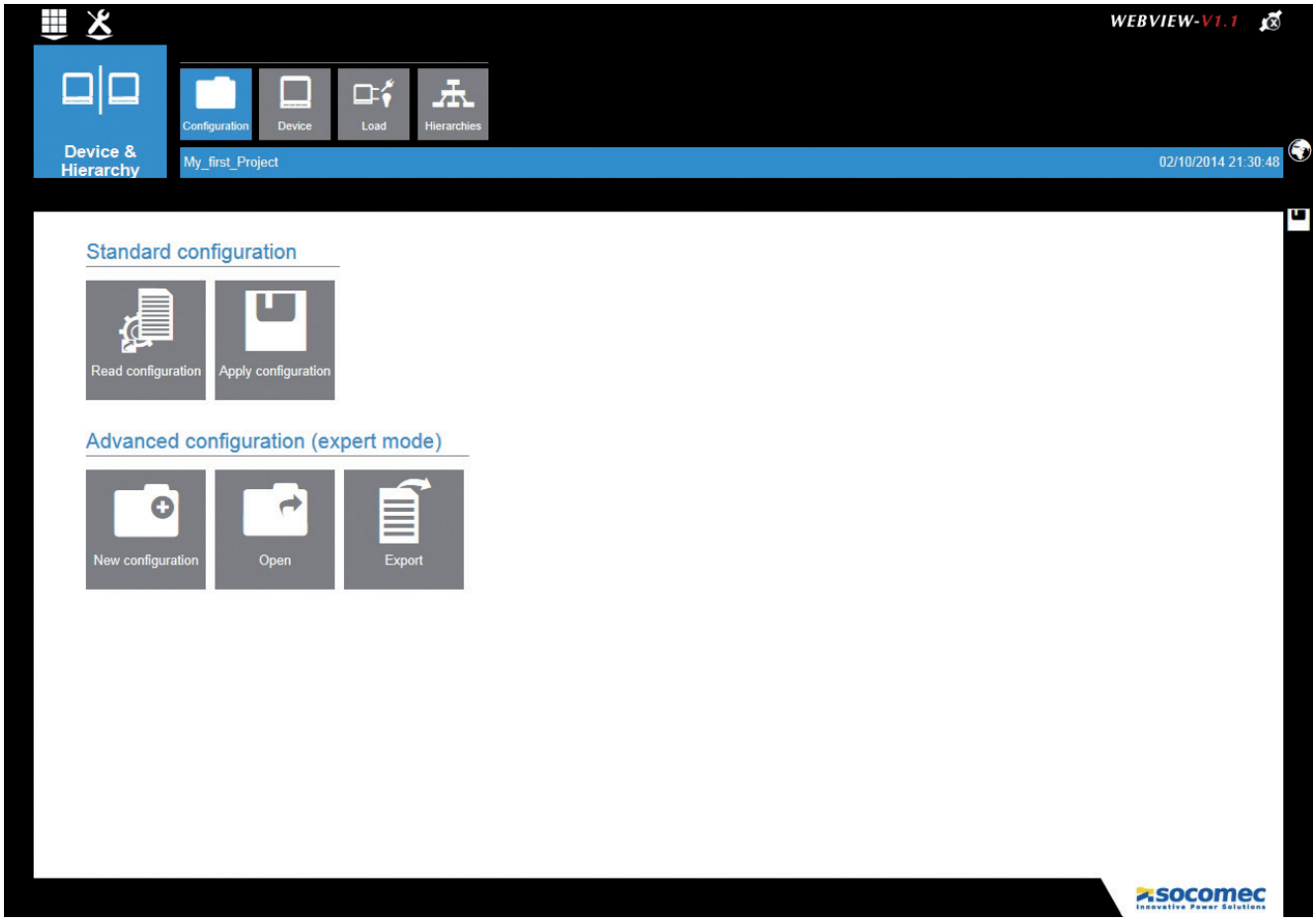
1 DIRIS B-30 device configured with 2 metering points:
- the arrival of all the electric energy of the Building
- the Heat pump

1 DIRIS Digiware device (U-30 + I-35) configured with 2 metering points:
- the lighting system of the building (Lights)
- the office equipment (Computers)

The consumption of the auxiliary equipment such as pumps, ventilation, motors, etc., is not measured directly but may be estimated by calculation.

### 5.4.1. Step 1 - Configuration

The tool for declaring Devices & Hierarchy opens automatically on step 1, allowing the user to read, open or create a configuration that will memorise all the parameters.




The interface allows a certain number of actions as detailed below:

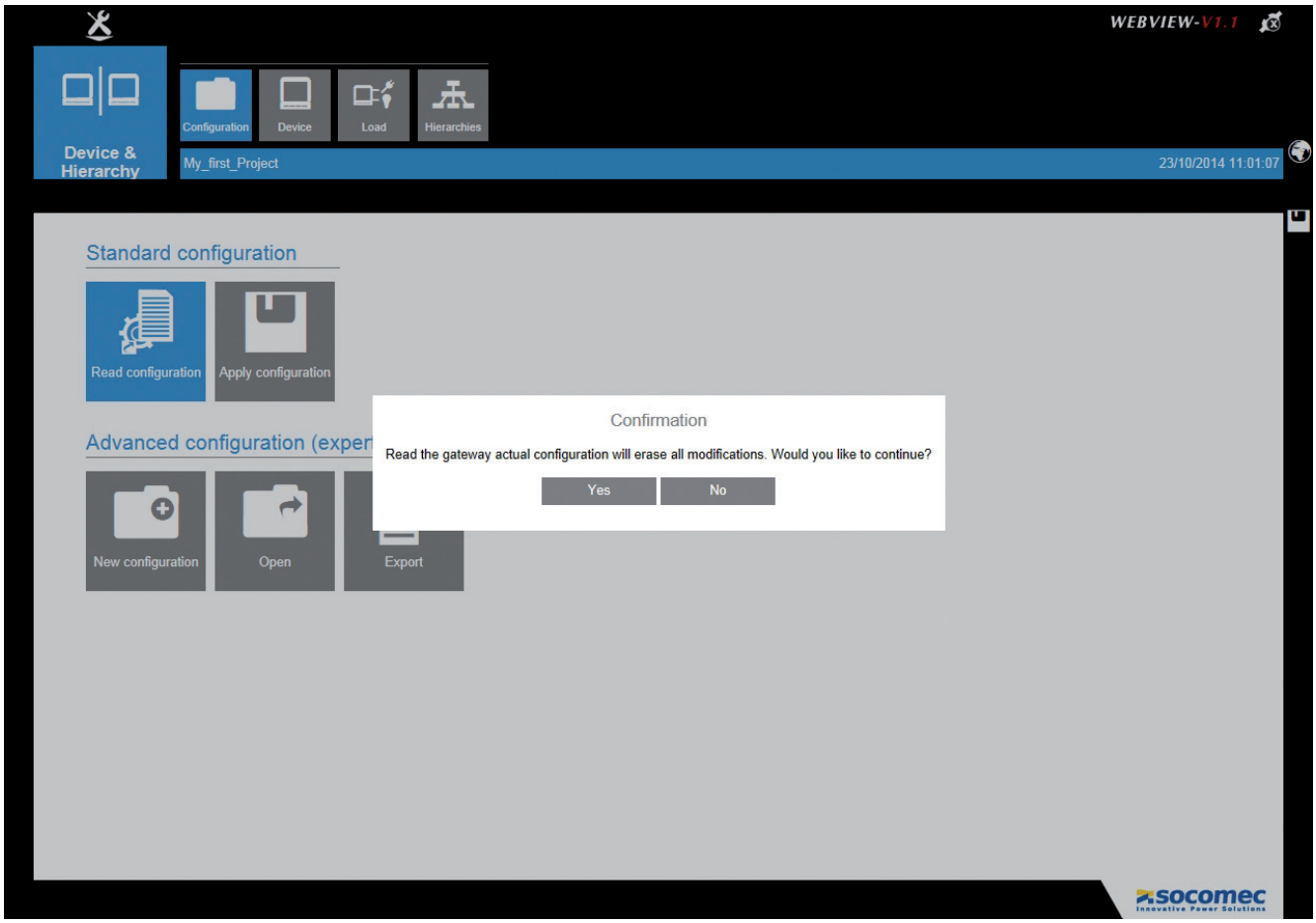
- Read configuration: this action allows the automatic recovery of the set of parameters of the active configuration memorised in the gateway (e.g.: set devices, locations, general configuration)
- Apply configuration: applies the configuration being entered and overwrites the existing configuration
- New configuration: creation of a new configuration
- Open: allows the user to load a configuration file from a PC
- Export: allows the current configuration to be exported to the PC

## 5.4.2. Step 2 - Devices

The Devices step allows the user:
- To view the products detected by the gateway
- To pre-declare a new product to be connected to the gateway
- To give a name and a location to the products

The following screens describe the process to be followed depending on the product configuration. Ensure in advance that there is a good working communication between the gateway and the products.

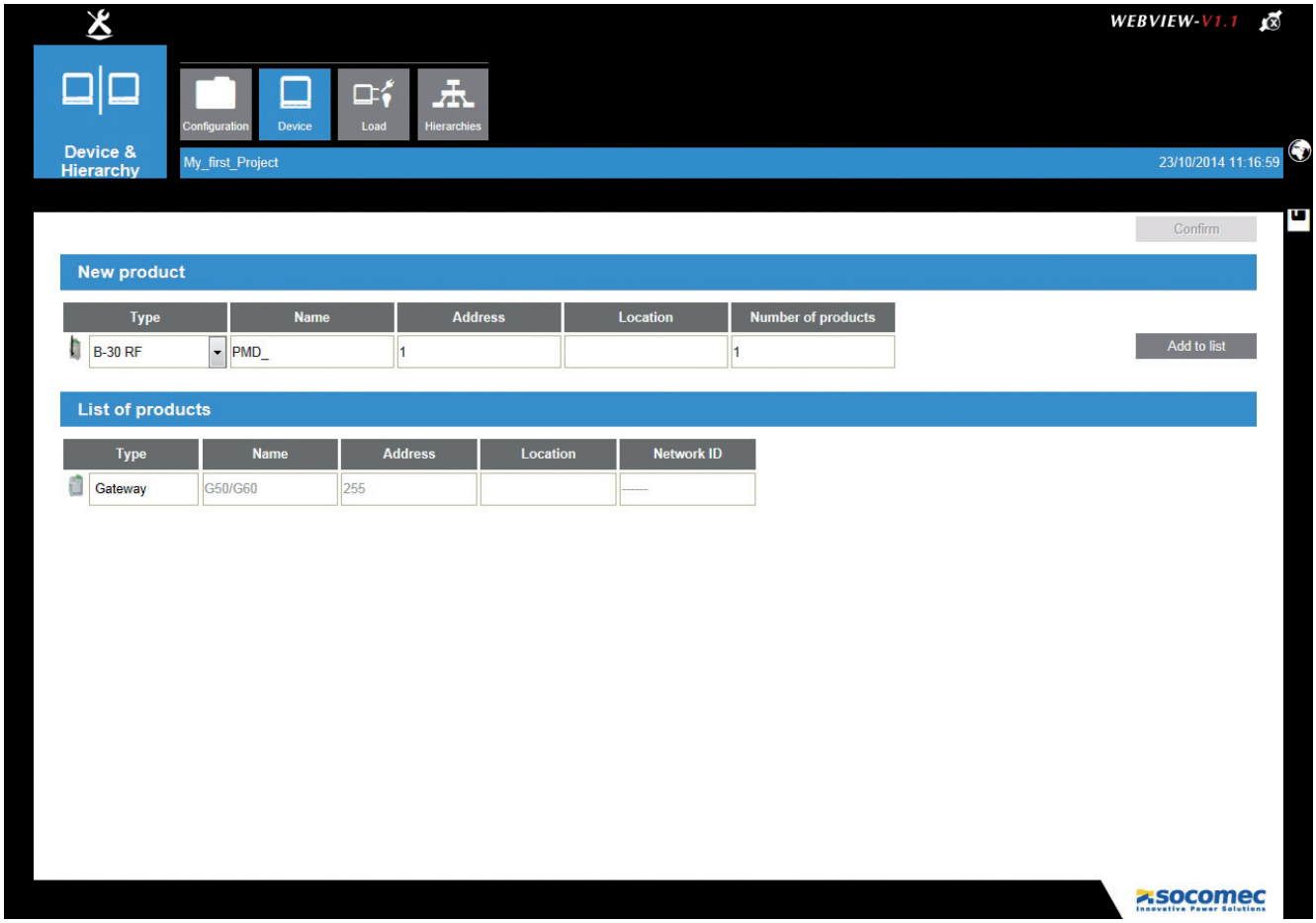
**Configuration 1 - The addresses of the products DIRIS and COUNTIS are not configured**
Starting from the Configuration screen, click on Read configuration to recover the configuration parameters memorised in the DIRIS G gateway.
The following screen appears:




By choosing Yes the gateway parameters are loaded to access the Devices screen.

The List of products allows the user to view the configured products:

- The DIRIS G Gateway
- But not the meters (COUNTIS) and PMD (DIRIS), as their addresses have not yet been configured




In order to continue, the user must configure the product addresses using the methods at his disposal:

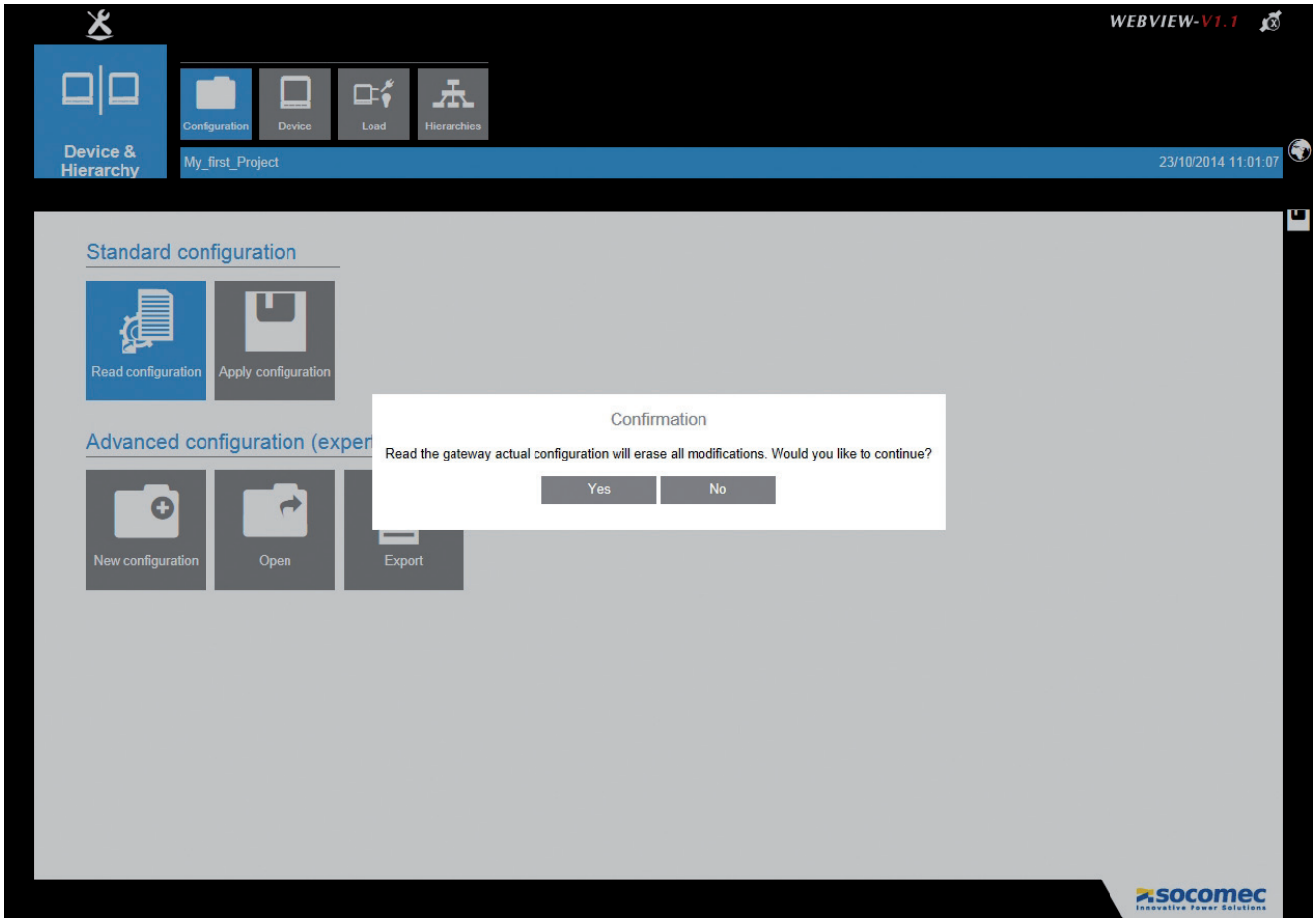
- Directly on the products
- With the Easy Config configuration software
- Using the auto-addressing procedure

(For further details on these configuration modes, see the manuals for the products and for Easy Config).

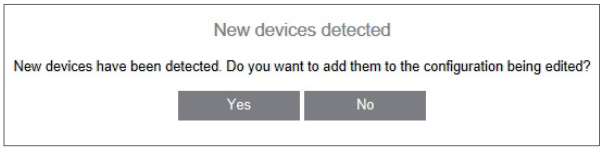
### Configuration 2 - The addresses of the products DIRIS and COUNTIS are configured

Starting from the Configuration screen, click on Read configuration to recover the configuration parameters memorised in the DIRIS G gateway.

The following screen appears :



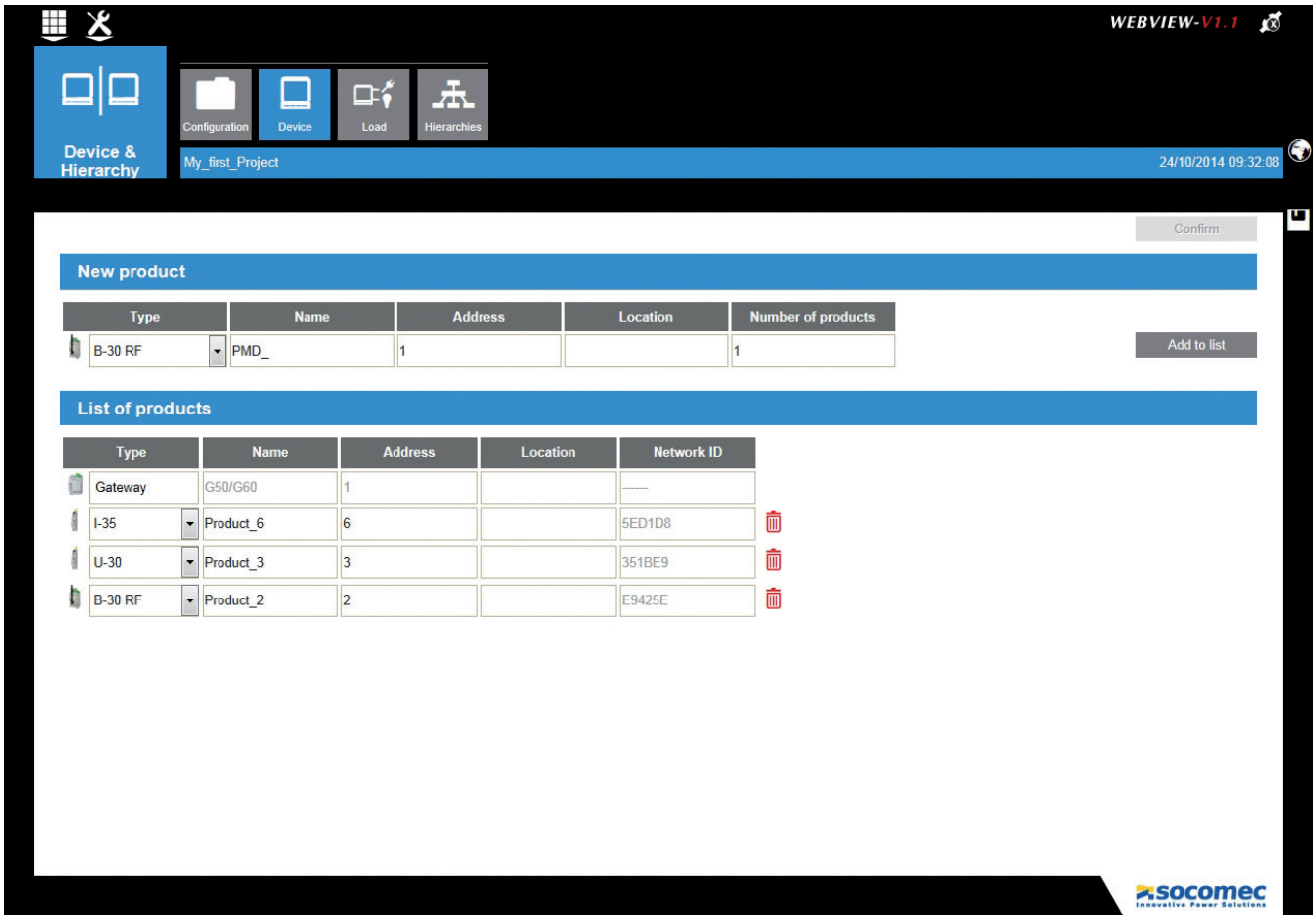

By choosing Yes the gateway parameters are loaded and the following messages to be confirmed then appear:




This gives access to the Devices screen.

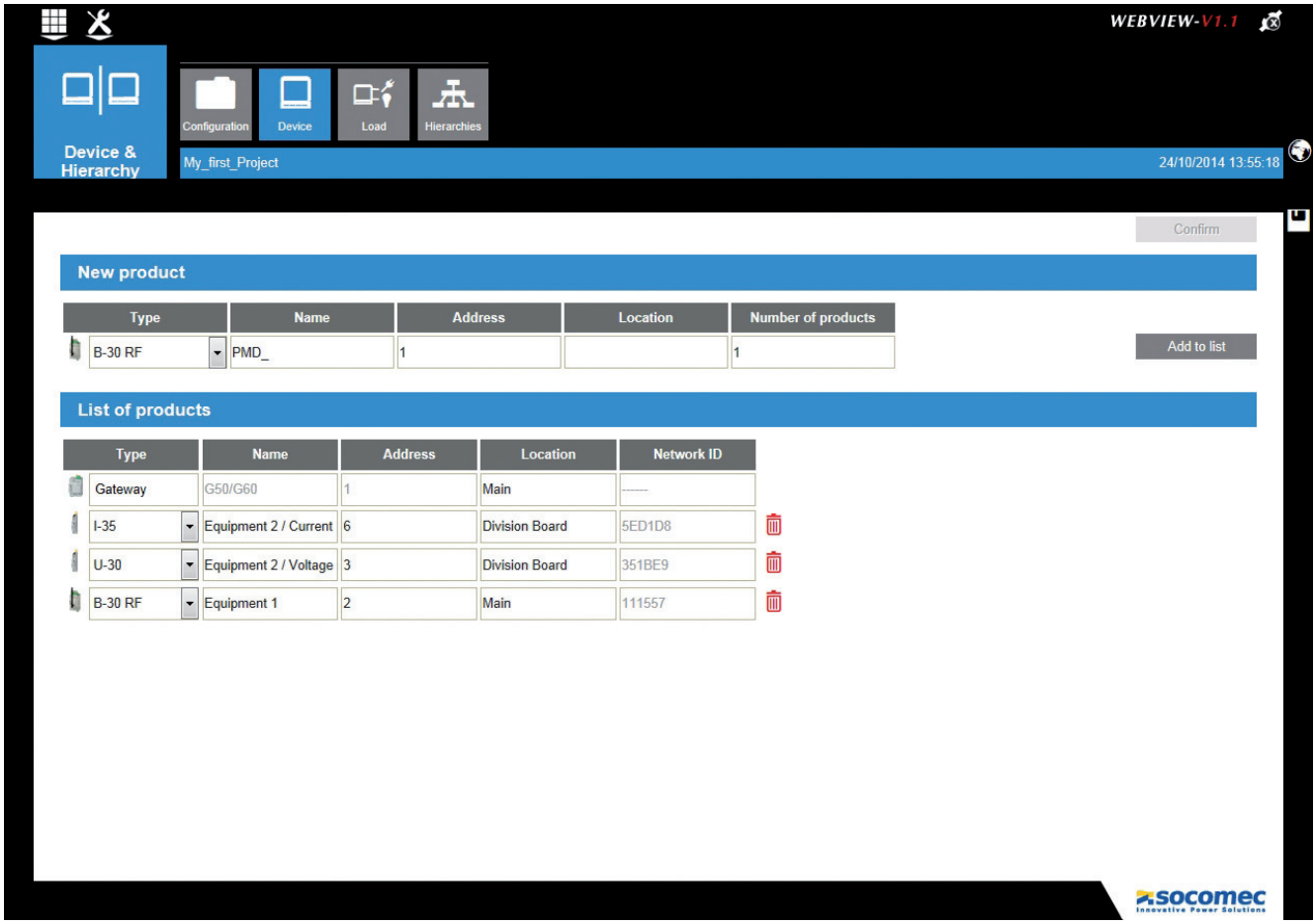
The List of products allows the user to view the configured devices:
- The DIRIS G Gateway
- The meters (COUNTIS) and PMD (DIRIS), as their addresses have been configured

The following are listed for each product:
- Type
- Name: Name already chosen at configuration with the Easy Config or name given by default
- Modbus Address
- Location: helps locate the physical position of the product in the installation. The field will be filled if completed at the time of configuration with the Easy Config, otherwise it will be empty
- ID Network: corresponds to a unique identifier unique present on the control units of the DIRIS B-30 and DIRIS Digiware

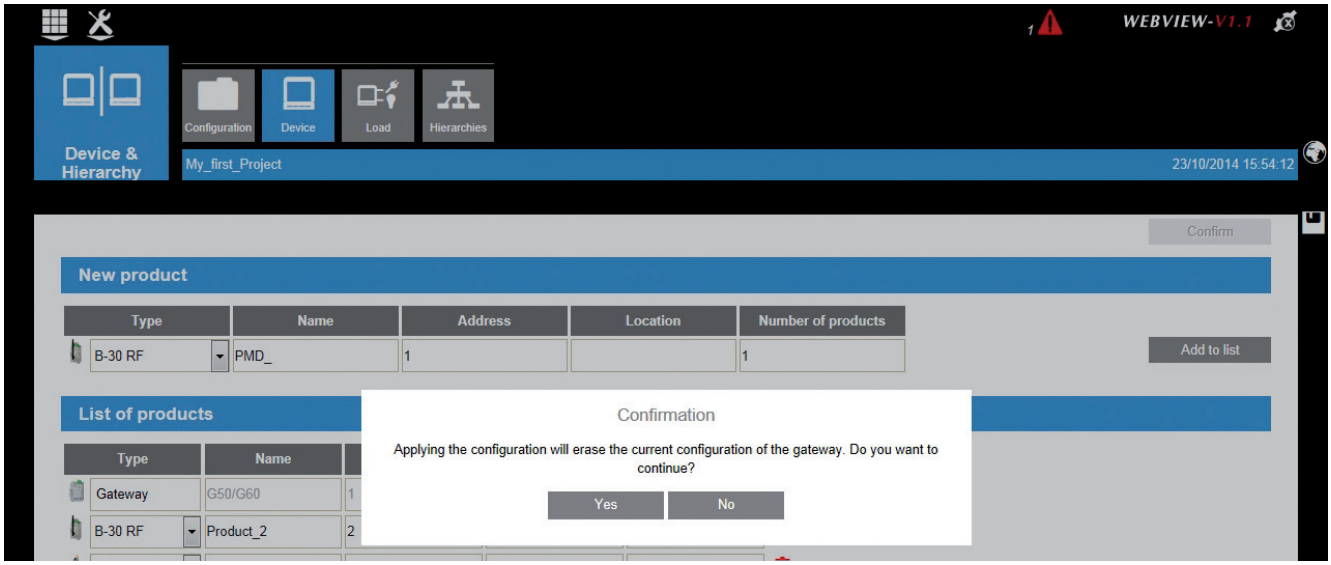


The configuration to be entered for the example chosen is the following:

| Type | Name | Location |
|---|---|---|
| I-35 | Device 2 / Current | Division Board |
| U-30 | Device 2 / Voltage | Division Board |
| B-30 RF | Device 1 | Main |




To move on to the next step Load, you must click on Confirm to record this Step of the configuration.



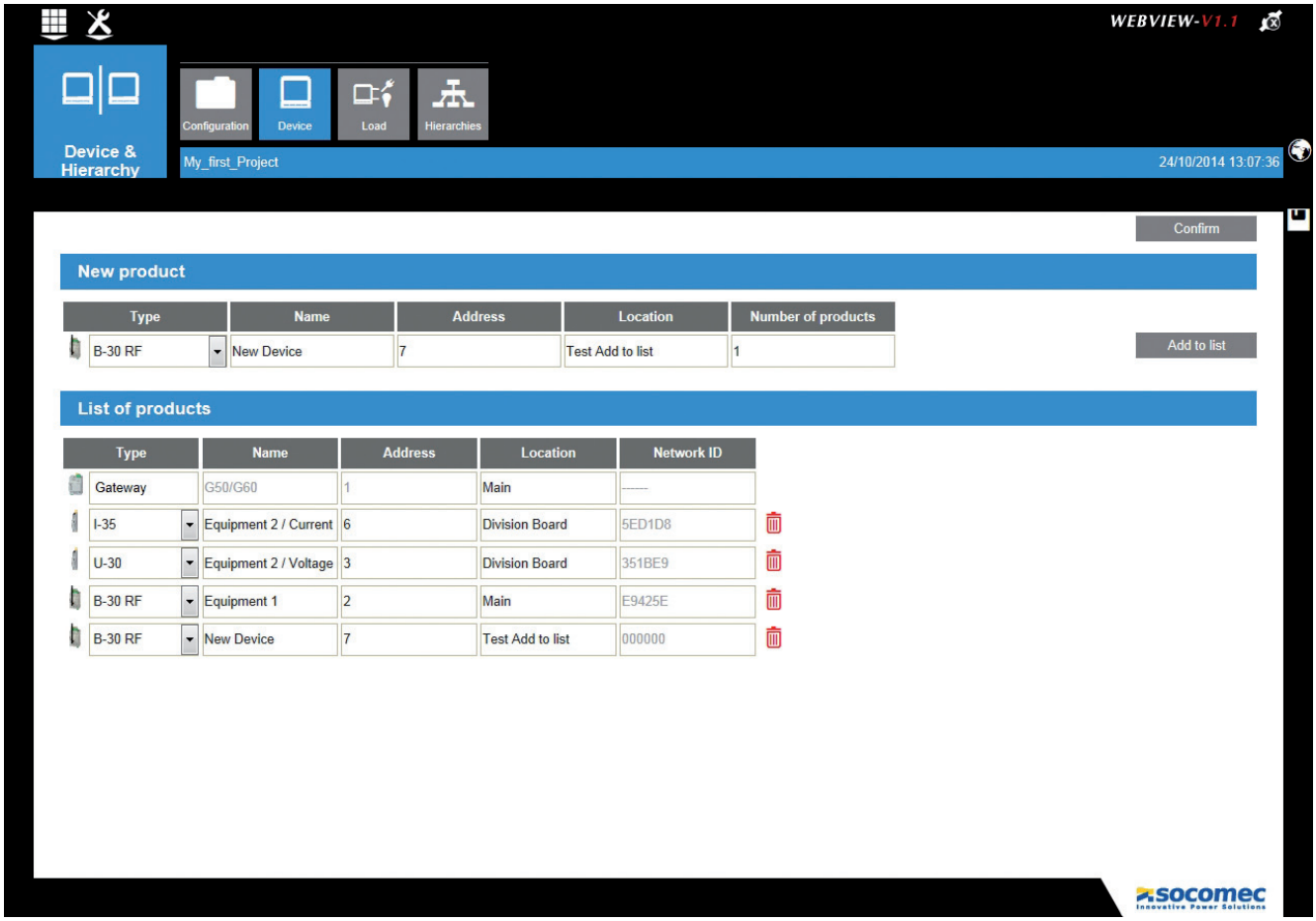
### Configuration 3 - Addition of products not yet connected to the DIRIS G gateway

If a product is not yet connected to the gateway, it can be added manually in the New product section. The user chooses the Type of product, assigns an Address to it and gives its Location. Several unconnected products can be added by completing the field Number of products.

By clicking on Add to list, the products are added to the List of products associated with the gateway.

If several products have been added, they will appear with an automatic incrementation of their address and their name.

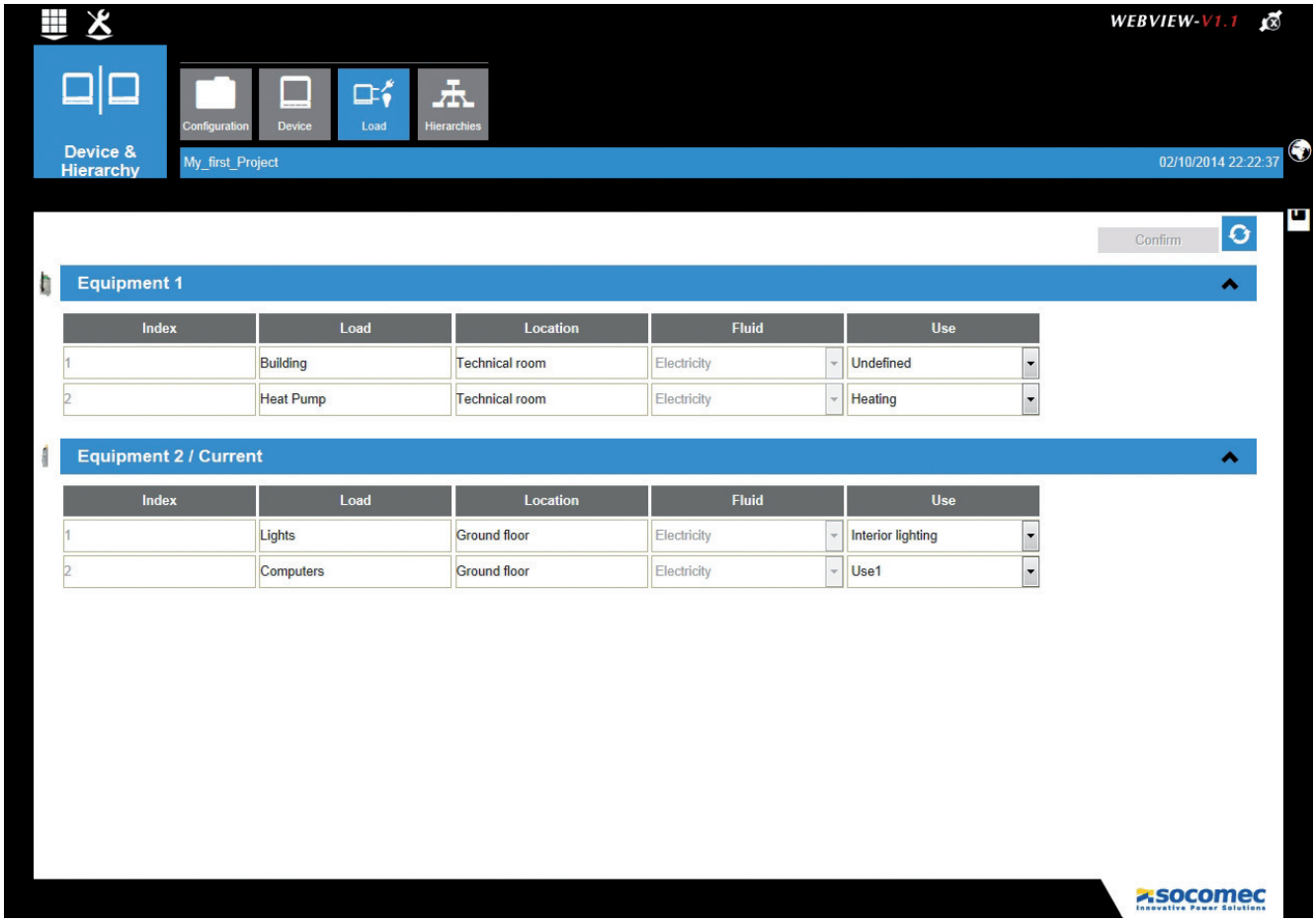
In the example below, the DIRIS B-30 RF with address 7 has been added:




To move on to the next step Load, you must click on Confirm to record this Step of the configuration.

### 5.4.3. Step 3 - Load

The Load stage allows you to describe the loads to be associated with each metering point.




The devices in the previous step present all their available metering points.
The number of associable loads depends on the configuration of the devices carried out in Easy Config or directly on the product.

For example, certain devices can measure 3 single-phase loads and 1 three-phase load.

In our example, the DIRIS B-30 and DIRIS Digiware U-30/I-35 measure respectively a three-phase load and a single-phase load.

A Name, a Location and a Use can be associated with each load. The location will indicate for example where the load is situated.

The configuration to be entered in this step for the example chosen is the following:

| Equipment | Product name | Location | Load name | Use |
|---|---|---|---|---|
| B-30 | Equipment 1 | Technical room | Global | Undefined |
| B-30 | Equipment 1 | Technical room | Heat pump | Heating |
| U-30/I-35 | Equipment 2 | Ground floor | Lights | Lighting |
| U-30/I-35 | Equipment 2 | Ground floor | Computers | IT |

The assignment of uses to the different loads will allow the presentation of a distribution of consumption by end-use.

## 5.4.4. Step 4 - Hierarchies

The construction of customised hierarchies is available only in DIRIS G-50 and G-60 gateways.
The Hierarchies step allows the organisation of the previously declared metering points in the form of a tree structure, offering a functional vision of the loads.
The hierarchy generally represents a geographical organisation (site =>buildings=>zones), allowing the display of a distribution of flows by zones.
Other representation modes are also possible: electric tables, services of an organisation, etc.

### 5.4.4.1. Construction rules

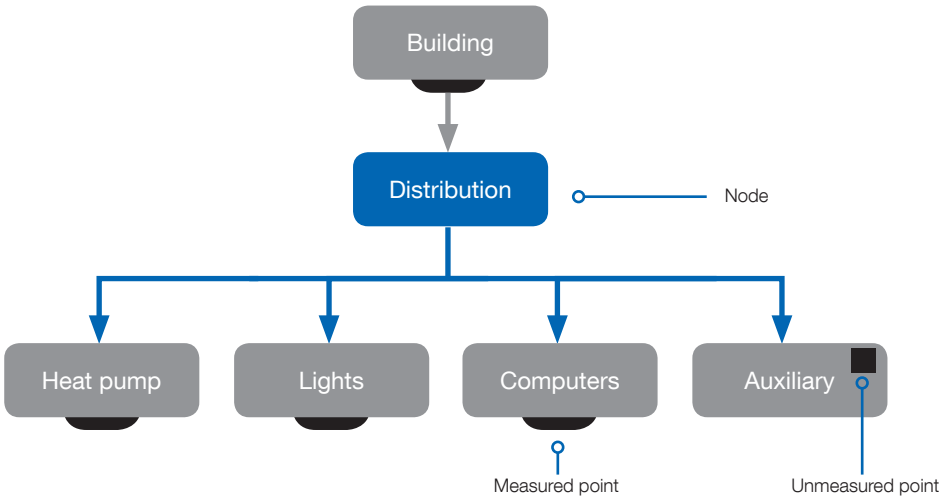
The hierarchy is constructed from the following 3 elements:

- Node: This models the tree structure in several hierarchical levels
- Loads: Corresponding to the available metering points supplied by the devices
- Unmeasured point: Automatic calculation of an unmeasured load (see example).

The rules for the construction of Hierarchies are as follows:

- A hierarchy is single-fluid (for example : Electricity) and cannot combine several fluids (water, gas, electricity)
- 10 different Hierarchies can be created

The hierarchy to be constructed for the example chosen is the following:

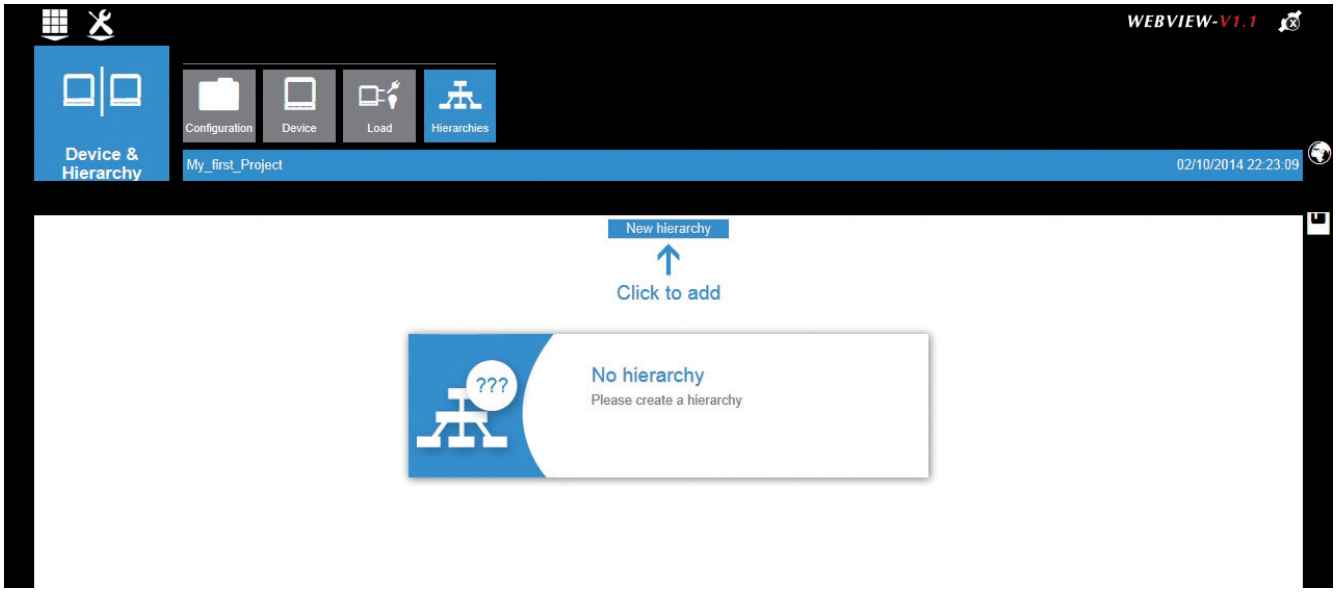



An "Unmeasured point" can be constructed to evaluate the "Auxiliary" flow which is not implemented:

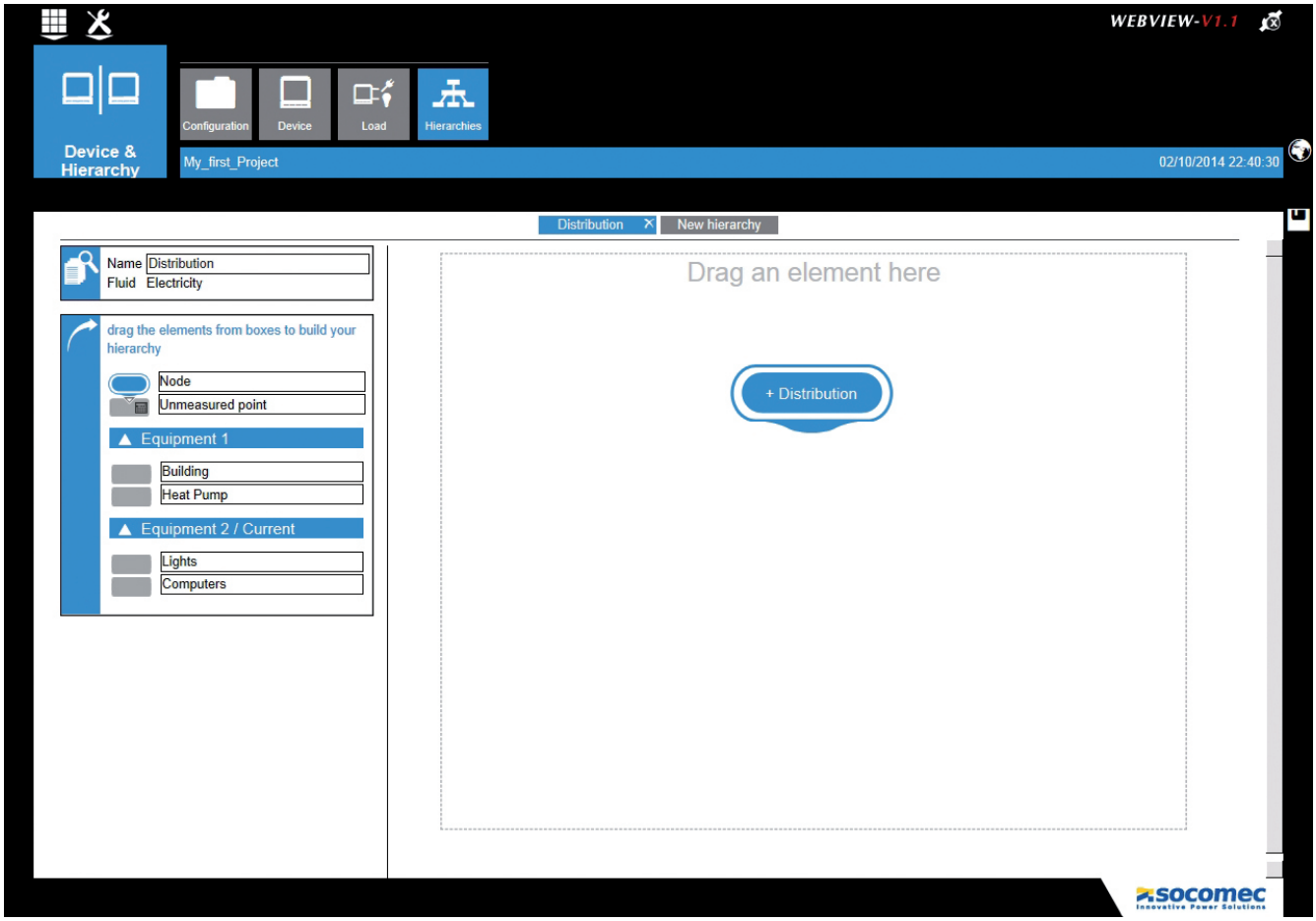
• Auxiliary = Building - (Heat Pump + Lights + Computers)

5.4.4.2. Construction process:

**1. Creation of a new hierarchy.**
The creation of a new hierarchy results in the appearance of the main node

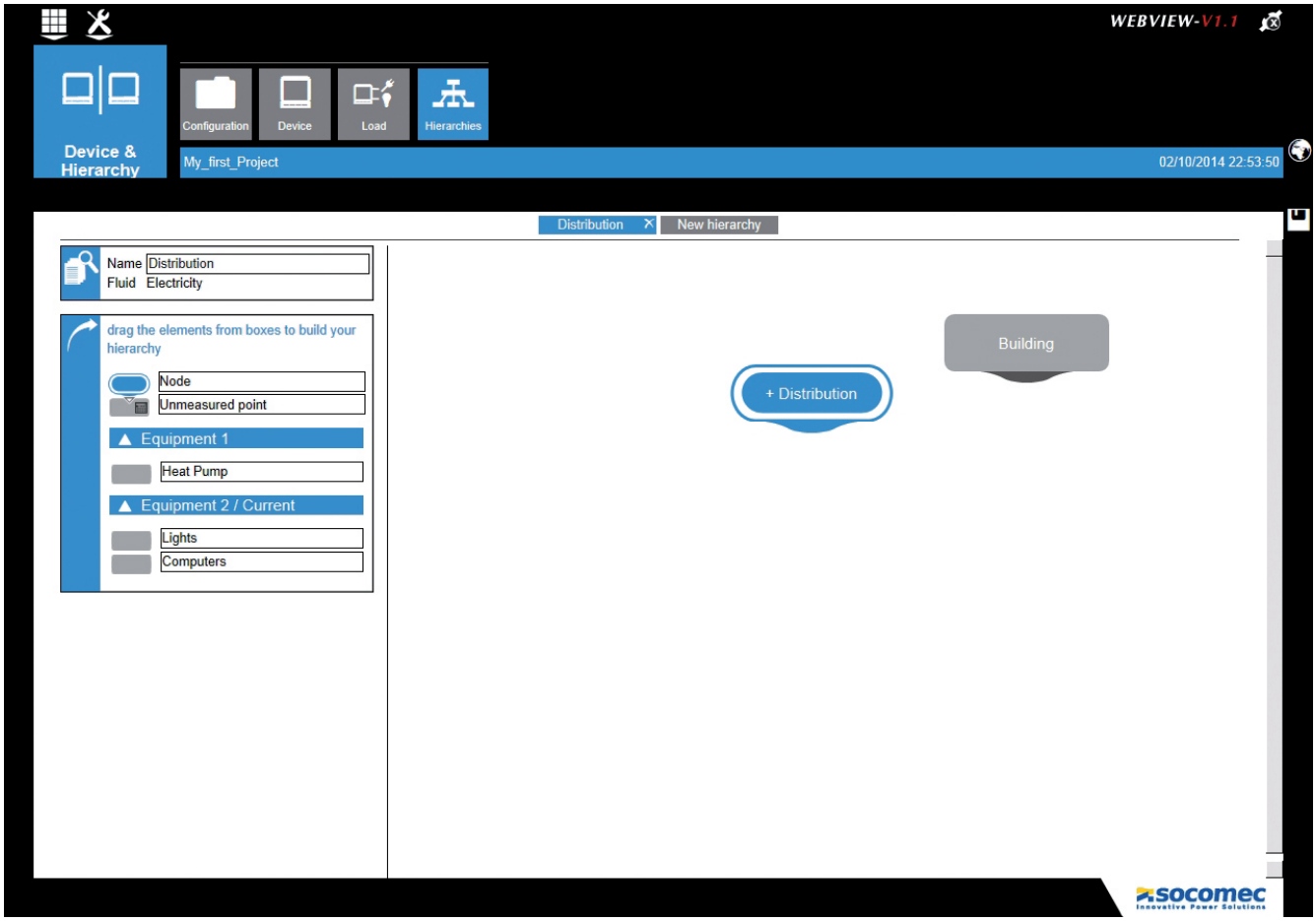



**2. Building blocks**
The list of building blocks available appears (metering points, nodes, unmeasured points).



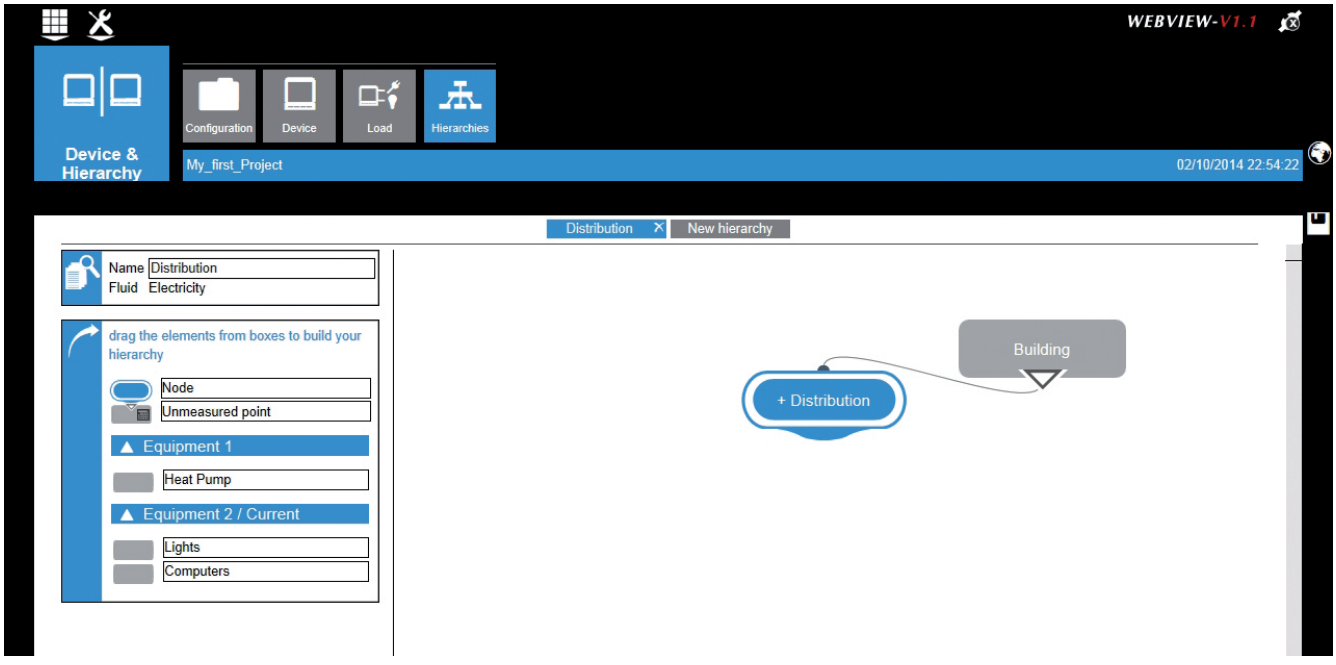
### 3. Positioning of the metering points

The interface allows the available metering points presented on the left to be dragged towards the associated graphic zone.

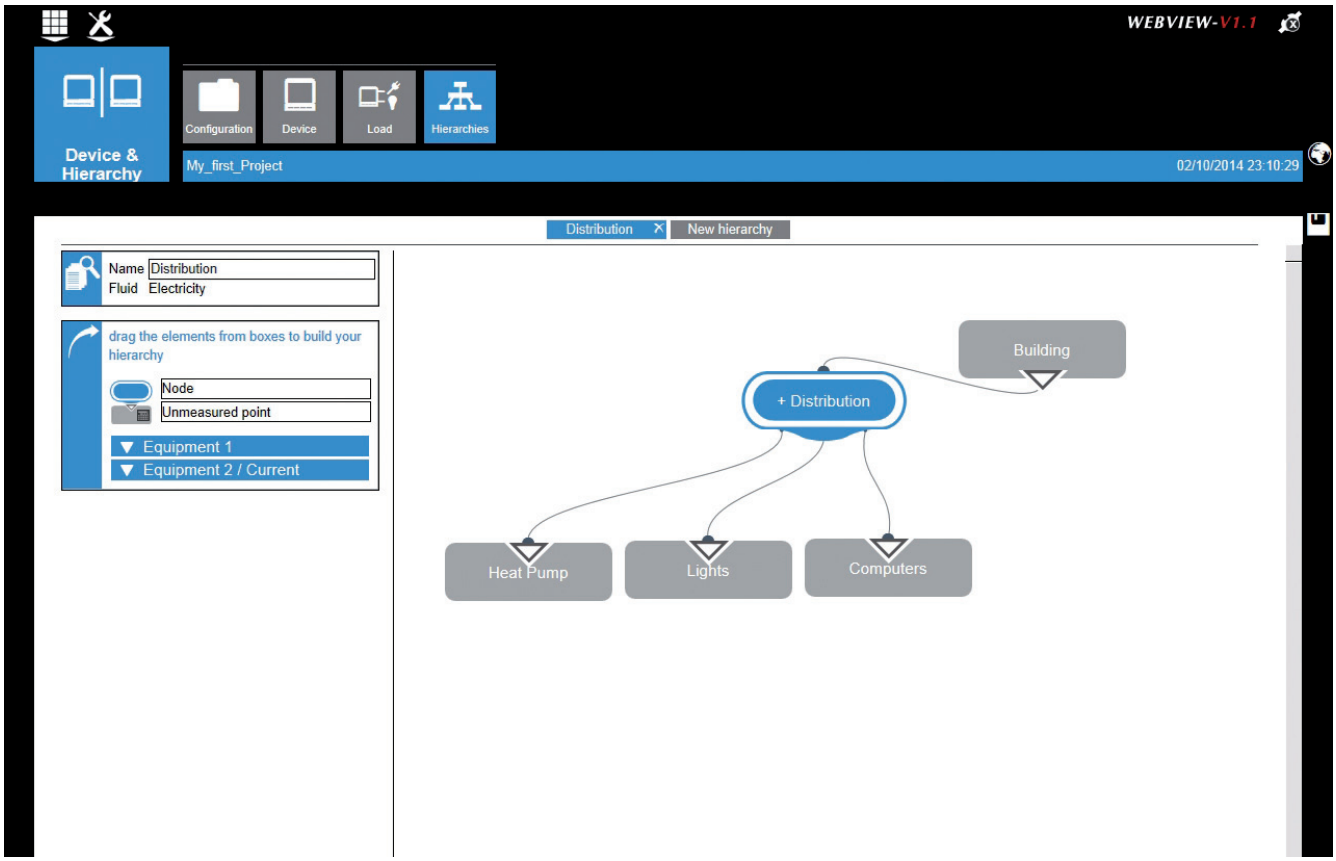



### 4. Creation of links

The links must be created in the direction of flow.
Click on the link with the mouse and drag it from the black box of the "Building" metering point to the "Distribution" node.
A triangle appears on the metering point, indicating the direction of energy flow.

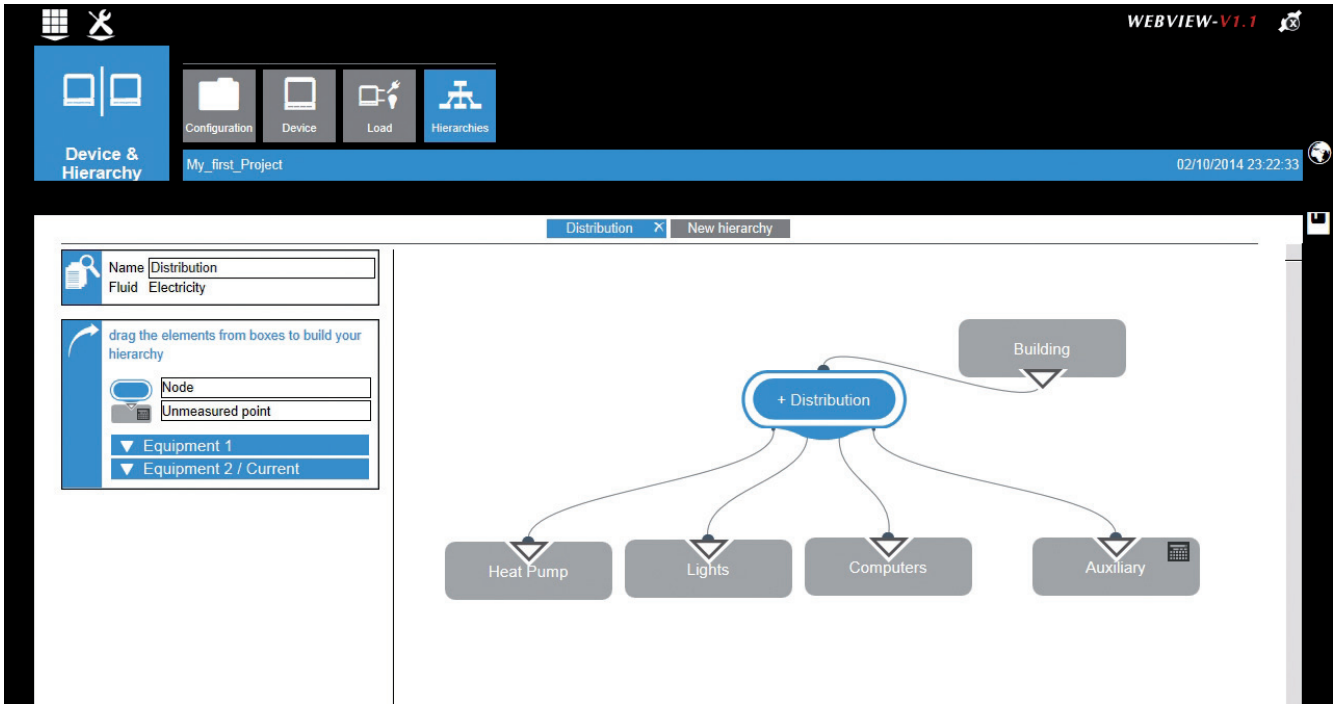


Same procedure starting from the "Distribution" node to the metering points associated with the loads.
The triangles appear, symbolising the flows entering towards the loads.




### 5. Creation of an "unmeasured" point

The "Auxiliary" unmeasured point can be created as follows:
- Drag an "Unmeasured point" object and give it a name (Auxiliary)
- Create the link, proceeding as for the metering points

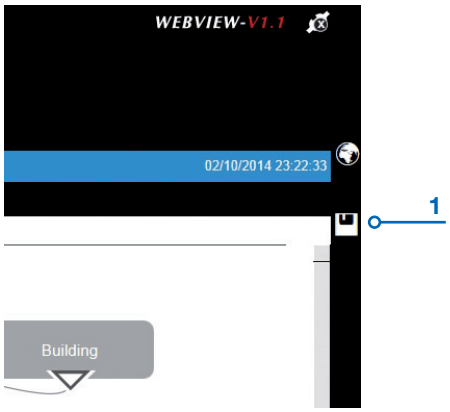



Once the hierarchy has been created, the distribution of consumption by load and by use can be viewed on the Analyse / Consumption screen described in the chapter "6.2 Analysis Process".

## 5.4.5. Applying the configuration

The set of parameters and hierarchies must bow be applied to the gateway to become the operative configuration.

This operation may be carried out:
- Either by using the short-cut symbolised by a "diskette" in the margin on the right (1)
- Or by returning to the Configuration function and using Apply configuration

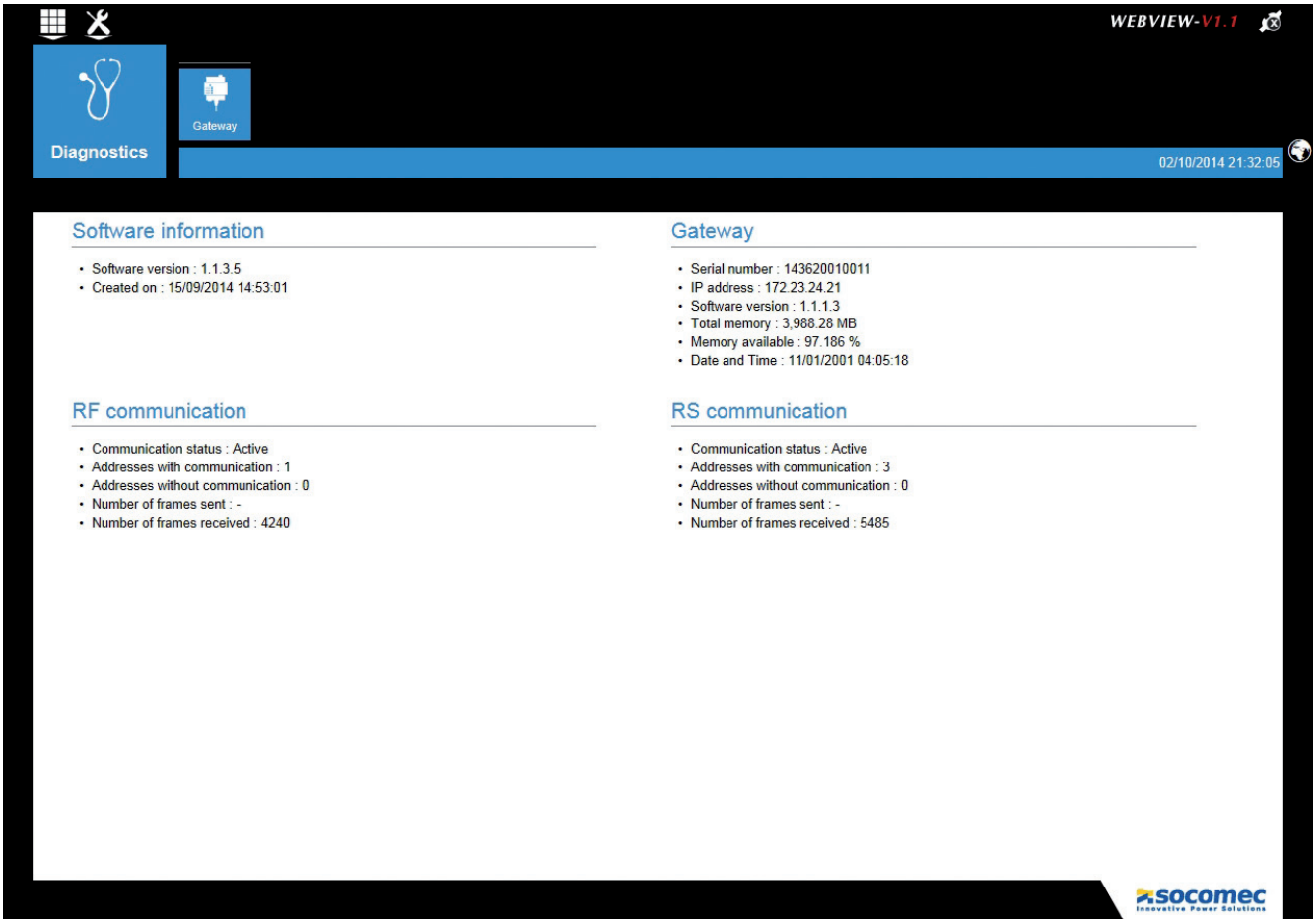



## 5.4.6. Saving the configuration

It is recommended to save the created configuration in a PC file.
To save, return to the Configuration function and use Export.
Follow the indications in the dialogue windows to name the file and save in in the appropriate place.

## 5.5. Diagnostics

This function allows you to identify the hardware configuration, the software versions and the state of the network communications of the gateway and the products.



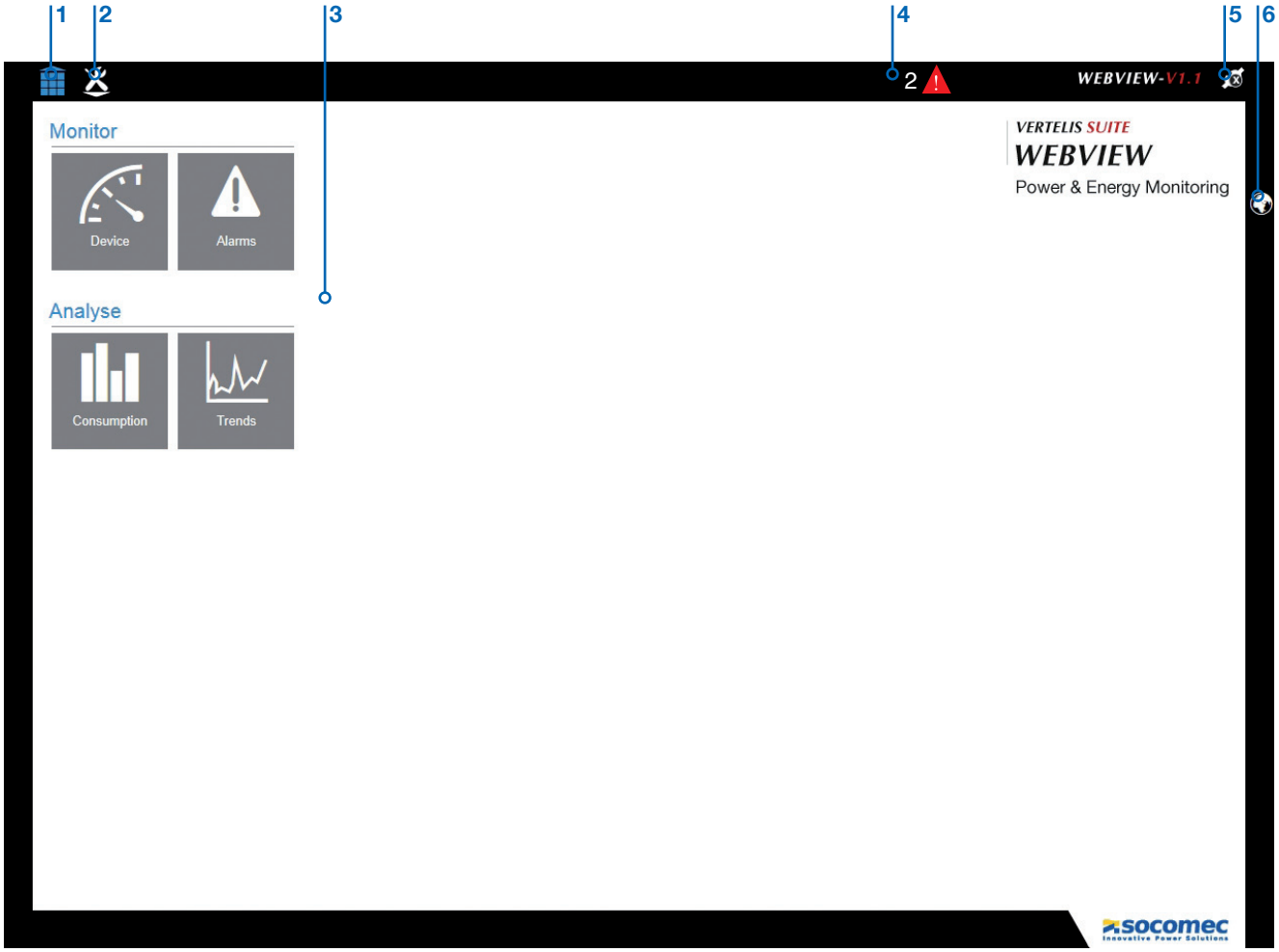

The following elements are displayed in the diagnostics window:

- Information on the software: version and date of creation
- Gateway: the (hardware) characteristics of the gateway are displayed
- RF communication: indicators linked to wireless communication*
- RS communication: indicators linked to RS wired communication (Modbus RS485 Communication between the gateway and the devices)

(*) Wireless communication is available on the DIRIS G-40 and G-60 gateways

# 6. USE OF THE GATEWAY

Access to the Web server causes the automatic opening of the home page in a standard user profile.
The home page of the WEBVIEW Power & Energy Monitoring Web server appears as follows:




The home screen allows access to the following functions:

*1. Return to home page*

*2. Access to the WEBVIEW configuration functions*

*3. Use of the WEBVIEW standard functions:*

*Monitor: Monitoring of the real-time data measured by the devices.*

*Devices: Allows access to the measurement and analysis functions of the electricity network*

*Alarms: Allows access to the list of product alarms*

*Analyse: Analysis of the data stored in the DIRIS G-50 or G-60 gateway*

*Consumption: Allows the display of the consumption data stored in the gateway*

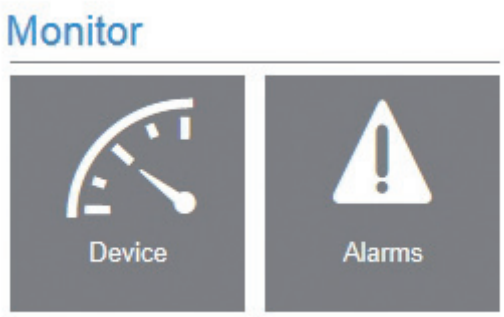
*Trends: Allows the display of the measurement trends stored in the gateway*

*4. Short-cut to the alarm data*

*5. Selecting the user profile*

*6. Selecting the language*

## 6.1. Monitor process



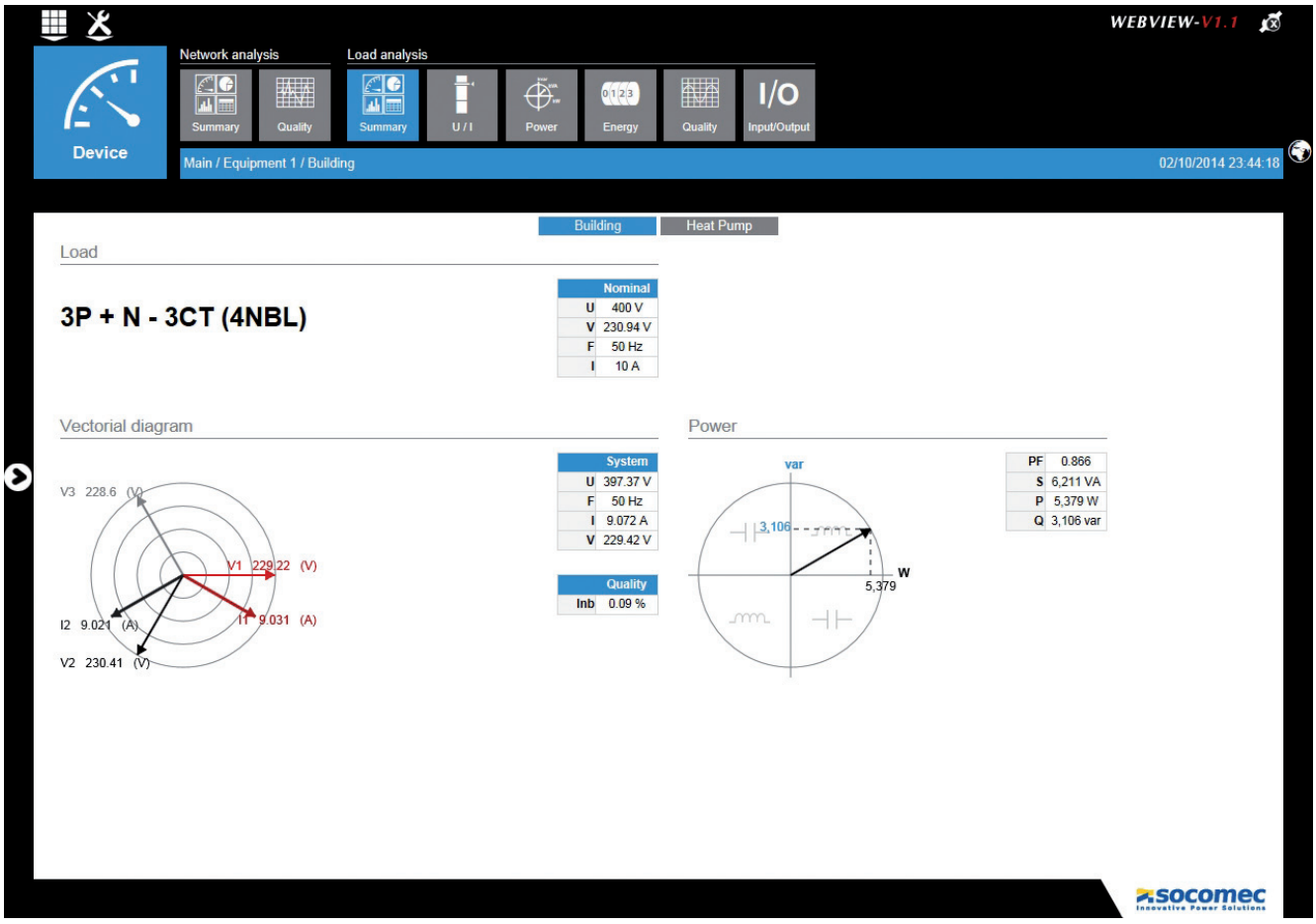

The Monitor process groups together the functions:

- Devices: allows real time display of the data measured by the devices (Quality, Power, Energy, Input/Output)
- Alarms: allows display of the alarm trends and of the current alarms.

Important: The data retrieved in WEBVIEW are conditioned by the configuration of the gateway and by the technical features of the devices. The screens will adapt automatically according to the devices and their configuration.
Example 1: An alarm will not be displayed if it has not been configured beforehand with Easy Config.
Example 2: The Quality view will be hidden if the device measuring the load does not have the THD function; the same applies to the Input/Output view which will be hidden if the device does not have Inputs/Outputs.

### 6.1.1. Device Function

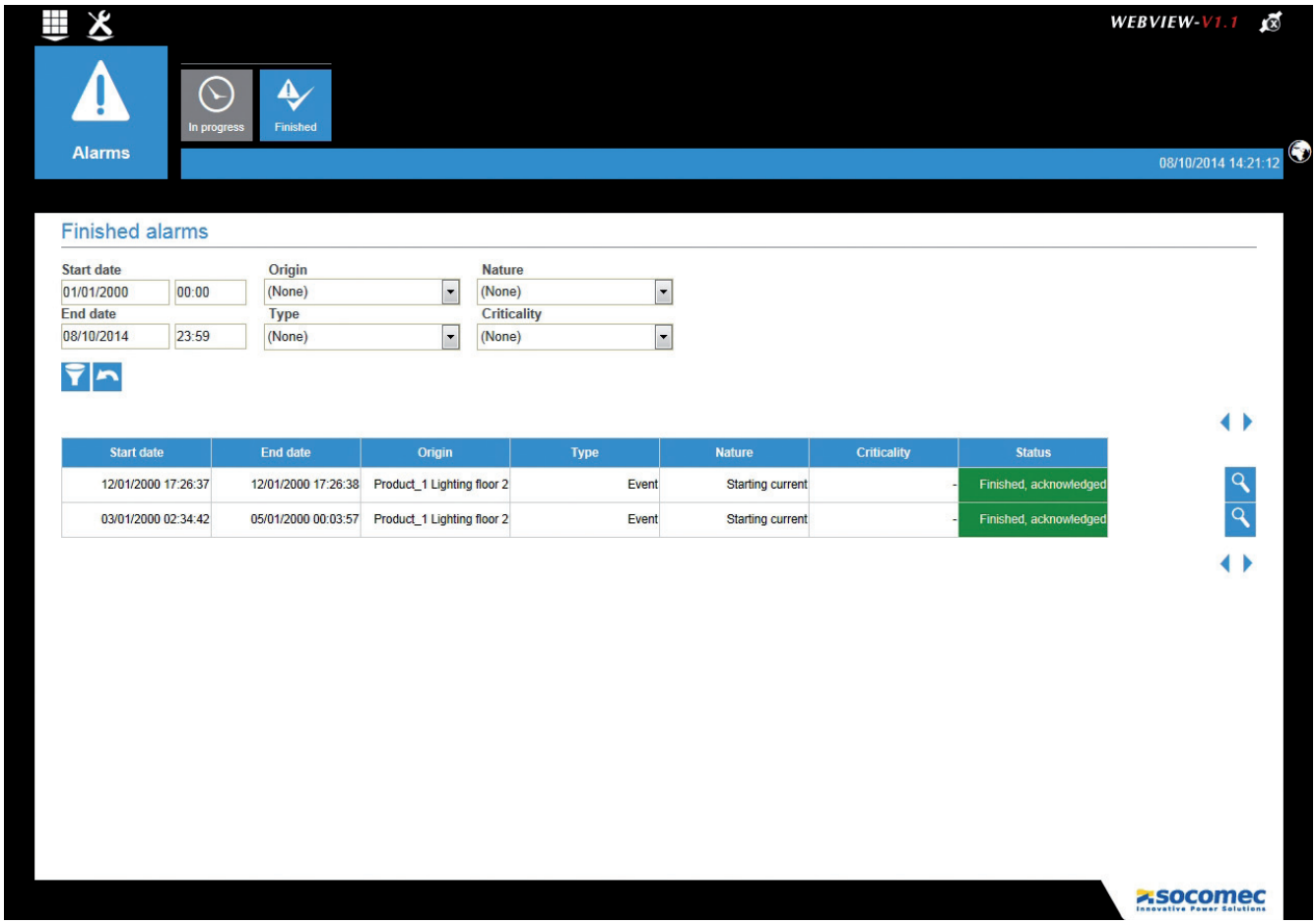
The data that can be viewed in the Device function allow the analysis of the network (Summary / Quality) and the analysis of the load (Quality / U/I / Power / Energy / Input/Output / Summary)



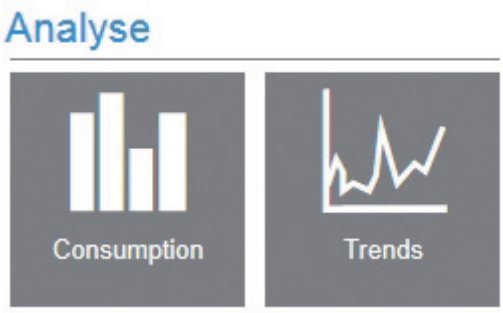
## 6.1.2. Alarms Function

The Alarms function allows the display of the current and concluded alarms reported by the devices (for example: exceeding a threshold, power surge, voltage dip, interruption, overload, communication error, …).

The "Magnifying glass" function gives the details of an alarm. This function requires DIRIS B-30 or DIRIS Digiware.



## 6.2. Analyse Process




The Analyse process allows you to explore and analyse the logged data on the DIRIS G gateway. It consists of these functions:

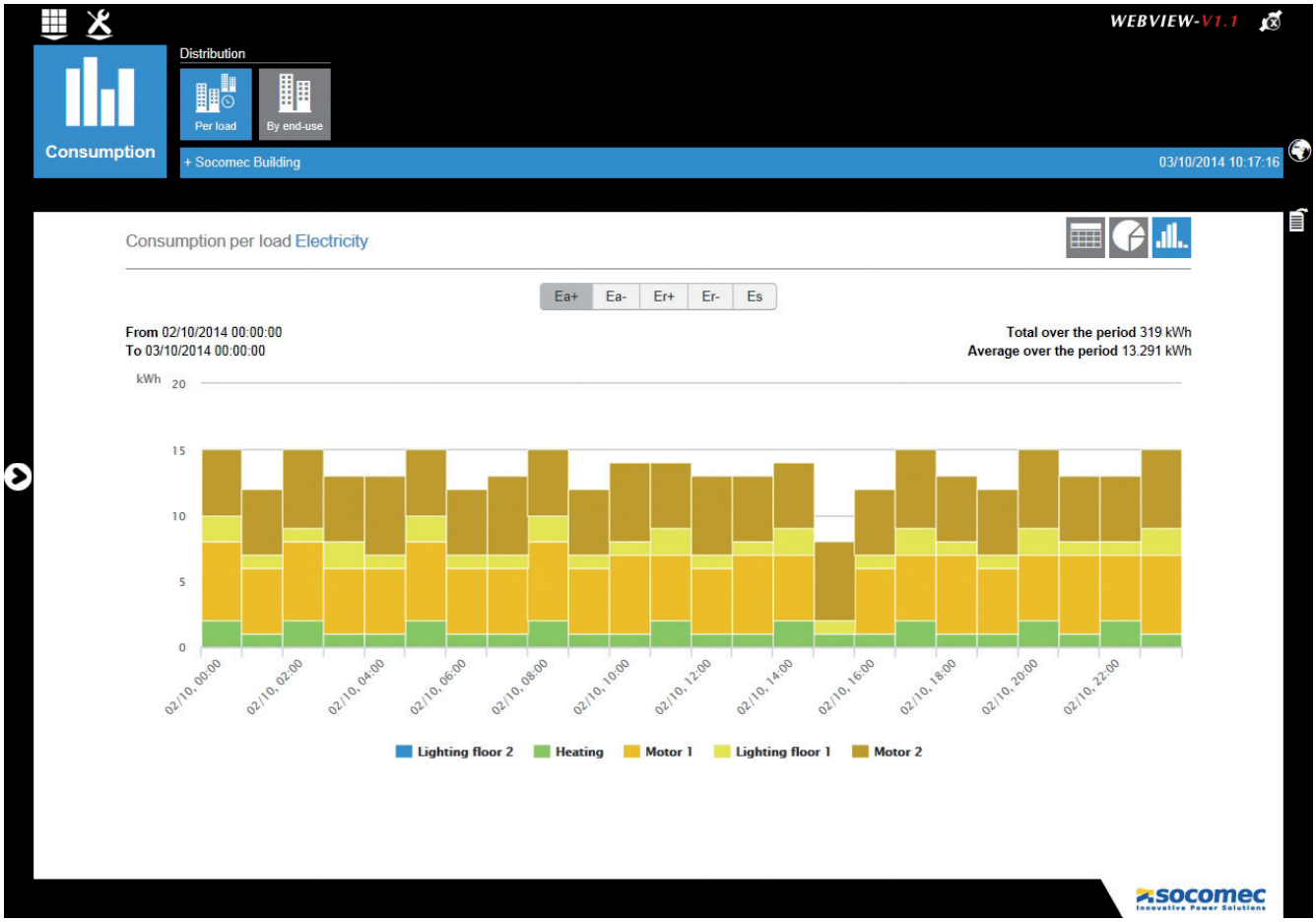
- Consumption
- Trends

Important: The data retrieved in WEBVIEW are conditioned by the configuration of the gateway and by the technical features and configuration of the devices.

### 6.2.1. Consumption Function

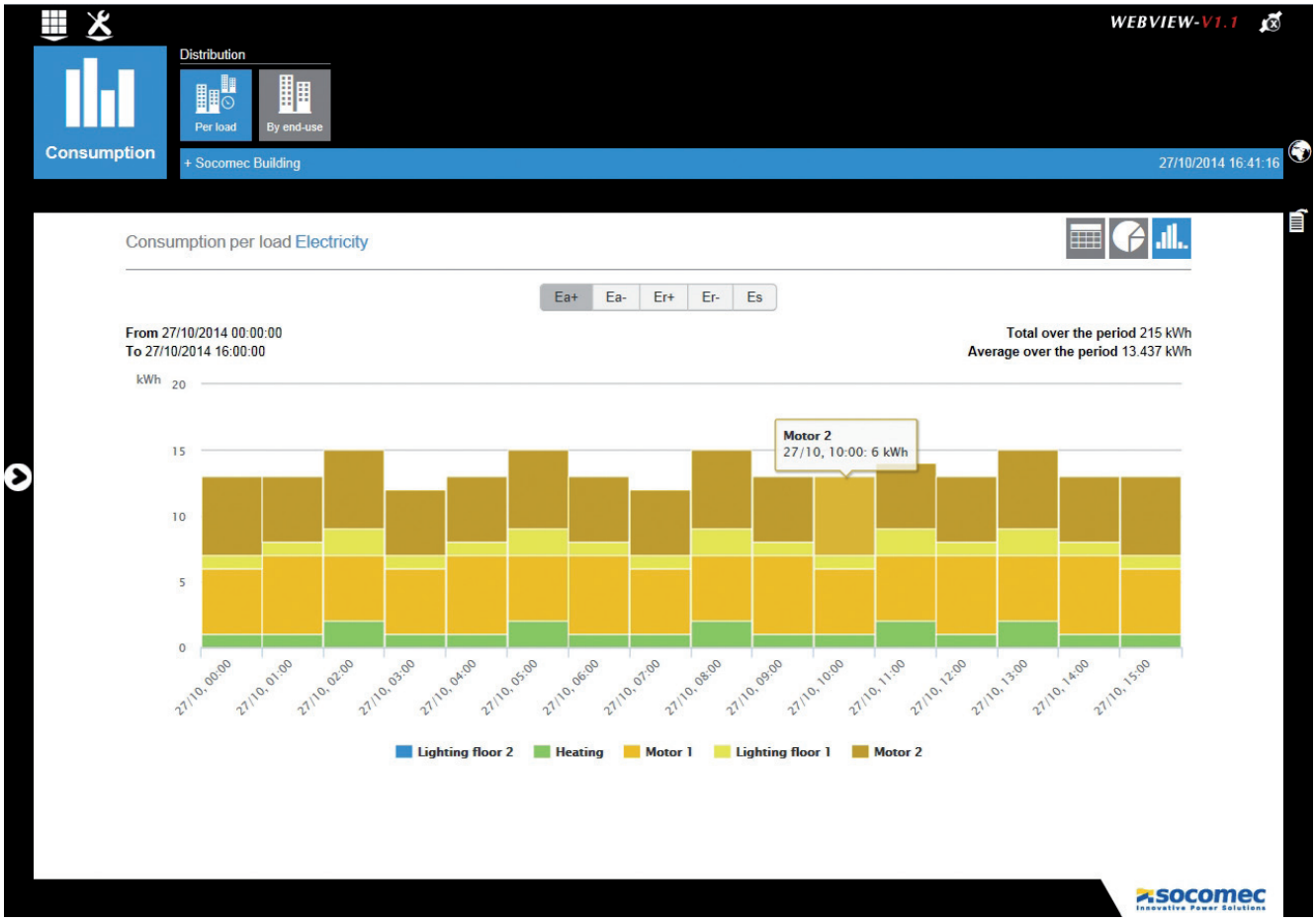
The Consumption function allows the representation of the energy flows consumed by the different loads in the time periods selected in the perimeter (see “6.3. Perimeter”, page 27).

The function proposes 2 predetermined representation modes: by load or by end-use.

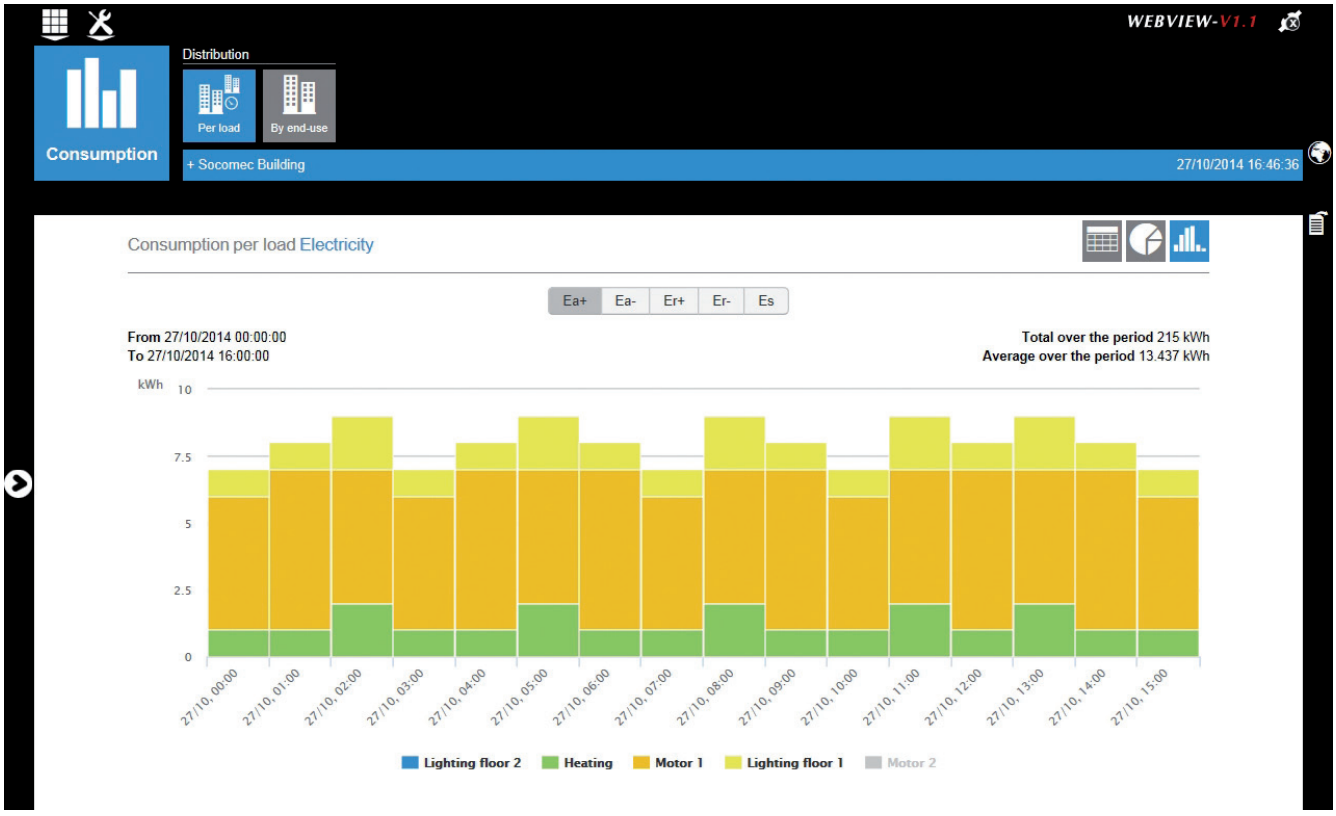



If no hierarchy has been created, there will be no distribution of consumption. The interface will then propose a simple view of the consumption and provide readings recorded by the devices.

Clicking on a consumption bar allows access to more detailed time data:
Month -> Week -> Day -> Hour
For example, clicking on the weekly bar allows access to daily consumptions.




By clicking on one of the headings of a load (in the example: Motor 2), it is hidden from view.

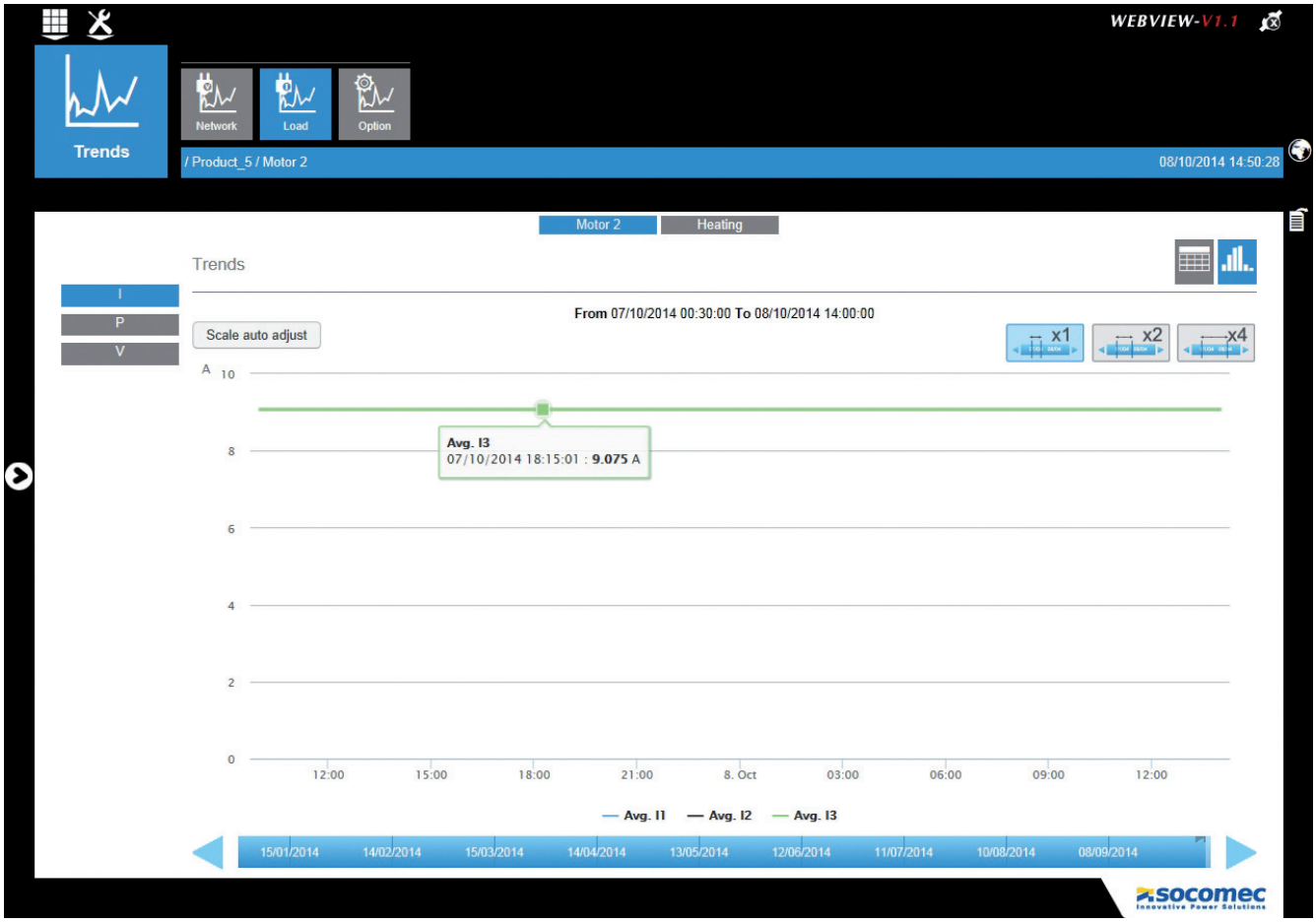



This function is also available on the screens presenting the same type of representation (for example: Display of harmonics in the Devices / Quality screen)

## 6.2.2. Trends Function

The Trends function allows the representation of the different values collected by the devices and logged over the time periods selected in the perimeter.

The logged values were selected at the time of configuring the software with Easy Config. This function requires DIRIS B-30 or DIRIS Digiware I-35 or I-45.




The part displayed corresponds to the highlighted zone shown on the time base.

This highlighted zone can be moved along the time base using the mouse.

An enlargement x1 / x2 / x4 of the highlighted zone is accessible by means of the icons at top right.

## 6.3. Perimeter

The perimeter will allow navigation in the data.

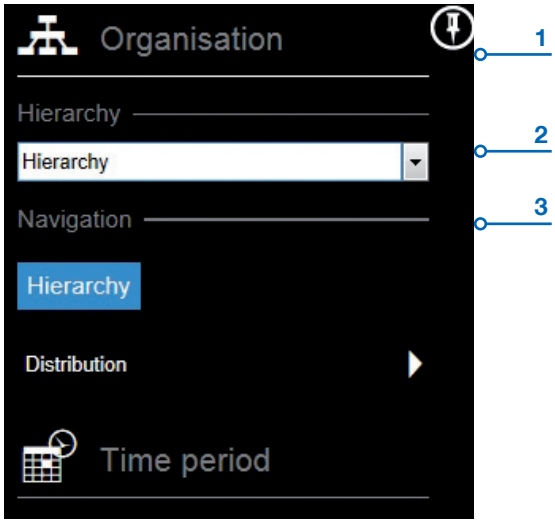
### 6.3.1. Opening the perimeter

When entering one of the 4 functions, an arrow appears in the left margin to allow the "perimeter" to be opened.

The perimeter can be hidden at any time to optimise the graphic space available.

The perimeter can be "pinned" at any time to keep it open.

### 6.3.2. Organisation Menu




This menu allows selection of the following elements:
1. Organisation: one click on this zone allows you to show or hide the Organisation menu
2. Organisation/Hierarchy: drop-down list allowing selection of the navigation mode

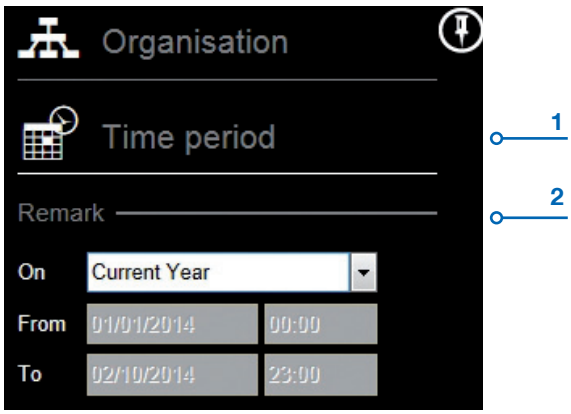
The proposed navigation modes are the following:

| **Function** | | **Navigation mode** | | |
|---|---|---|---|---|
| **Monitoring** | **Devices** | Device | Use | Fluid |
| | **Alarms** | No choice possible | | |
| **Analysis** | **Consumption** | Hierarchiy | Use | Fluid |
| | **Trends** | Device | Use | Fluid |

3. Organisation/Navigation: interface allowing navigation in the data depending on the chosen navigation mode.

### 6.3.3. Time Period Menu

The Time period menu is available only on DIRIS G-50 and G-60 gateways.
This menu appears only in the Analyse process.




This menu allows selection of the following elements:

1. Time period: one click on this zone allows you to show or hide the Time period menu
2. Time period/Remark: Drop-down list allowing selection of the time period. Possible selections: Current Year/ Current Month/Current Week/Current Day/Customise from...to...

The time selections must be confirmed with the Confirm button at the bottom of the perimeter

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