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COMP@S

QUICK START GUIDE




Your Power Solutions Partner

member of The Group™

Aug 19, 2015

Table of Contents

Before diving into more document, it is important to learn the bases in order to understand easily the next chapters. This chapter is about **practical** exercise specially designed to discover Compas system fundamentals.

At the end of this chapter you will be able to :

- ✓ Know the basics of ETSI standard
- ✓ Understanding Compas Structure
- ✓ Connect to the Compas web-application using usb or ethernet
- ✓ Navigate into the web interface
- ✓ Monitor alarms
- ✓ Changing fields into the site
- ✓ Changing descriptions
- ✓ Setting manually the time of the controller
- ✓ Adding a License to your system
- ✓ Changing the network configuration
- ✓ Use the on-board help

Chapter 1 : Connecting to a compas

Compas Controller has two main physical interface allowing connection to the user interface:

- USB
- Ethernet

1. Connecting using USB

1.1. Requirement

The USB Type-B socket provides a standard USB client connection, allowing having a local connection with any computer. Here follows the procedure.

Required material:

- A personal computer with USB capabilities;
- A standard Type-B plug to Type-A USB plug.
- **Do Not Connect usb Cable yet**

Required software:

- A Windows XP / Vista / Seven / 8 operating system.
- A web browser: it is recommended to use Firefox >= 22.x or Internet Explorer >=10.x.
- Microsoft Active Sync App :
  - With XP : http://www.microsoft.com/en-us/download/details.aspx?id=15
  - With Vista and Windows 7, if you have an internet connexion on the first connexion, Drivers will be installed automaticly
    - Download for off-line update:
      - Vista 32 bits : http://www.microsoft.com/download/en/details.aspx?id=14
      - Vista 64 bits : http://www.microsoft.com/download/en/details.aspx?id=3182

1.2. Procedure

1. Do not connect the USB cable yet

2. *Install the Active Sync application.* A computer reboot may be asked at the end of the installation.

3. *Activate the port forwarding over USB*

a. To do this, a small modification in the registry must be done. You can use the windows registry editor "Regedit"

   i. Press Windows+R

   ii. Enter "regedit" and press enter

   iii. Navigate to *HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows CE Services\ProxyPorts* and add a DWORD "*HTTP PORT FORWARDING*", with data 00000050

4. Connect the USB cable between the personal computer and the Comp@s monitoring.

5. Active Sync application should detect the connection and ask to "Set Up a PartnerShip". Just click on "No" and afterwards on "Next"

6. It is now possible to browse the Comp@s Flash disk content by going to: Start menu > Computer > Compas, under Windows Vista or Windows 7 (or: Desktop > My Computer > Mobile Device, under Windows XP).

7. Start your Web Browser and enter the URL address http://127.0.0.1 or http://localhost

8. The Comp@s web server will ask for a login and a password which are shown just below

9. Congratulation, You are now connected on the web interface as administrator of the system. Let's explore The Web Interface.

Need to deploy on several client

1. Open a new text file and write the 3 lines located below. Then, save the file as "Compas.reg"

2. Execute it (double-click) on each Computer that you want to configure

```
Windows Registry Editor Version 5.00
[HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows CE Services\ProxyPorts]
"HTTP PORT FORWARDING"=dword:00000050
```

Default admin password

Login/User Name: **admin**
Password: **compas**

(Please note that login and password are case sensitive)

1.3. Visual help

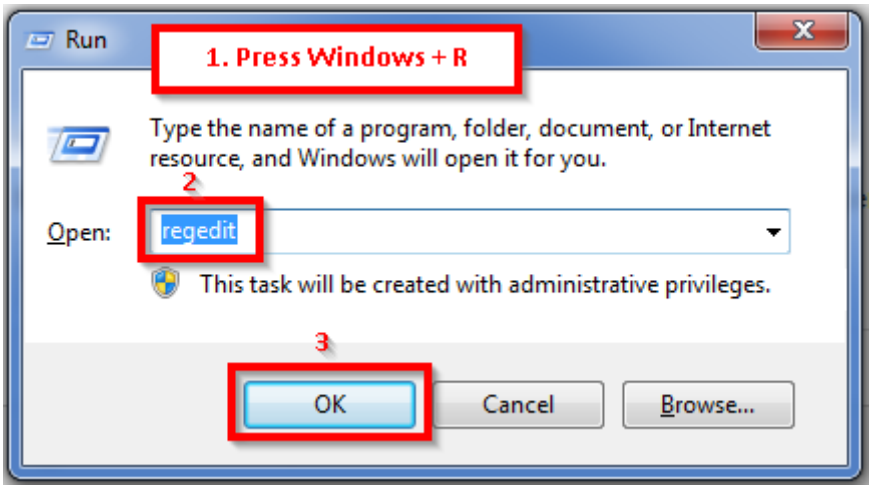


Figure 1 Open Regedit

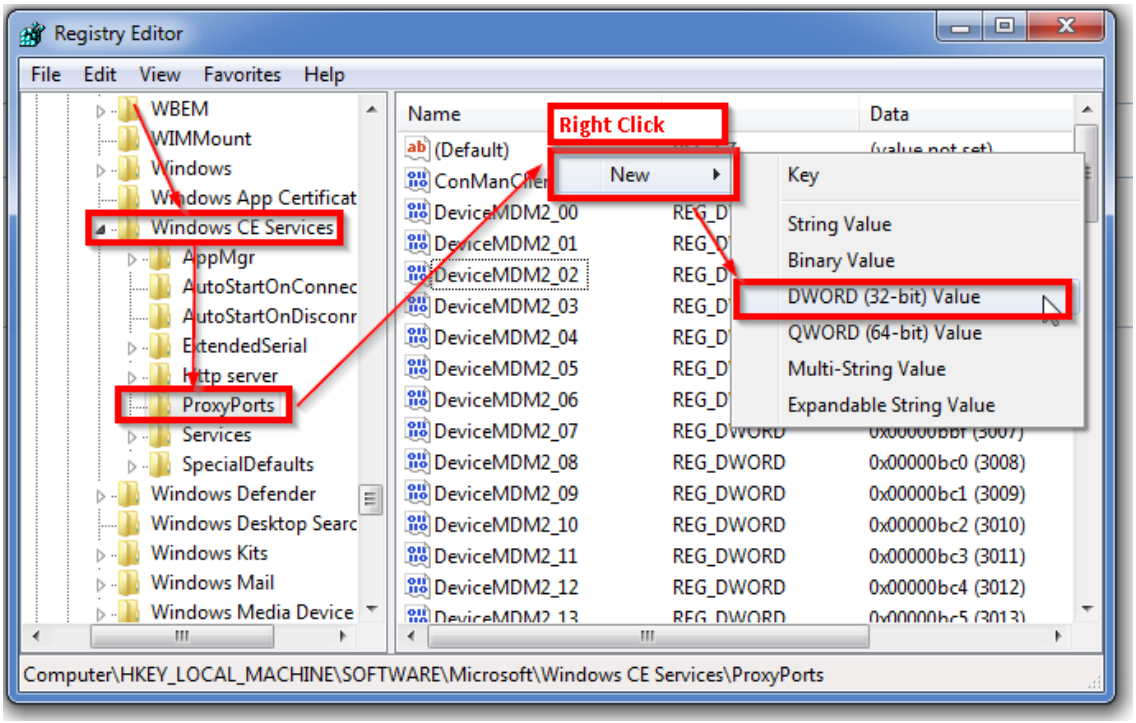


Figure 2 Navigate and create the DWORD key

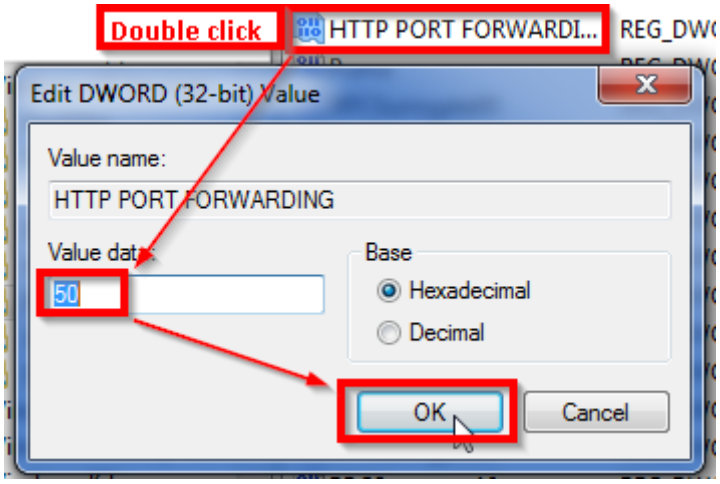


Figure 3 Edit the Key with value 50 (hex)

2. Connecting using Ethernet

The Comp@s monitoring RJ45 female port provides a standard 10/100 MBits Ethernet connection.

Default Ethernet Configuration

IP address: **192.168.45.2**
Sub Mask: **255.255.255.0**

2.1. Requirement

Required material:

- A personal computer with Ethernet capabilities;
- A Ethernet cable (Any recent PC have an automatic polarity detection)

Required software:

- Any operating system with an up to date web browser. It is recommended to use Firefox >= 22.x or Internet Explorer >=10.x.

2.2. Connecting procedure

To connect to the system, the personnel computer has to be configured with a static IP address. You can use the IP 192.168.45.3 for example, with 255.255.255.0 as sub mask.

1. Access the Network Connections control panel

    a. **Windows XP :** Start -> Control Panel -> Network Connections

b. **Windows 7 :** Start -> Control Panel -> Network and Sharing center -> Change adapter settings

2. Select the used connection, generally "*Local Area Connection*". Right-click on that connection's icon and click Properties.

3. Under "this connection uses the following items" scroll down to "Internet Protocol (TCP/IP)" and double-click on that. The "Internet Protocol (TCP/IP) Properties" window will appear.

4. Right now, "Obtain an IP address automatically" is probably selected. Instead, select "Use the following IP address" In the "IP address" field, enter the address you chose (for example, 192.168.45.3). The subnet mask will automatically become 255.255.255.0, which is correct. Then, click the "OK" button.

5. Start your Web Browser and enter the URL address http://192.168.45.2

6. The Comp@s web server will ask for a login and a password which are shown just below

7. Congratulation, you are now connected on the web interface as administrator of the system. Let's explore The Web Interface.

Default admin password

Login/User Name: **admin**
Password: **compas**

(Please note that login and password are case sensitive)

2.3. Visual Help

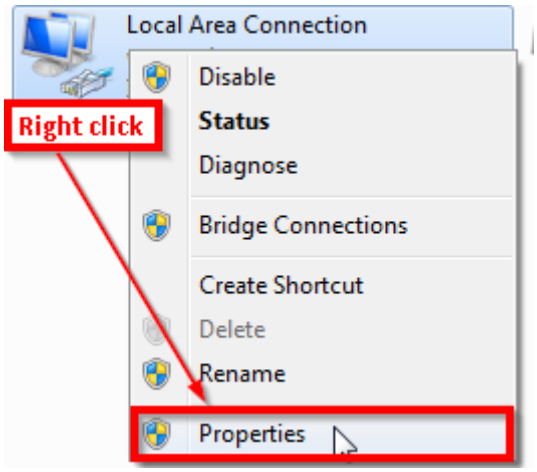


Figure 4 Open network interface properties

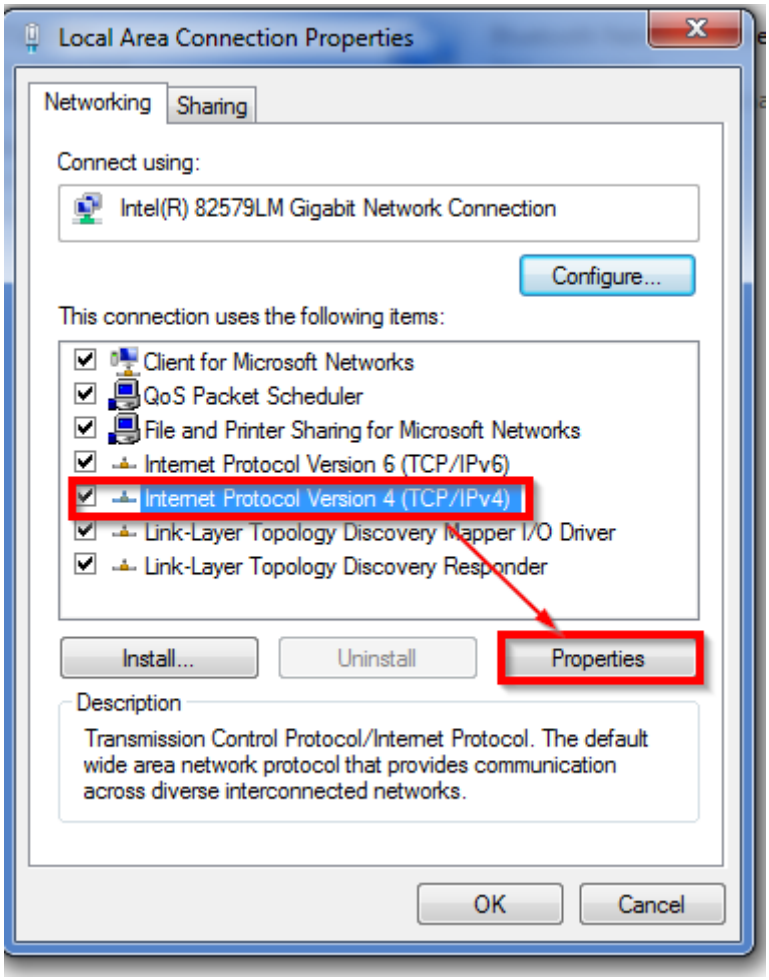


Figure 5 Edit Properties of IPV4

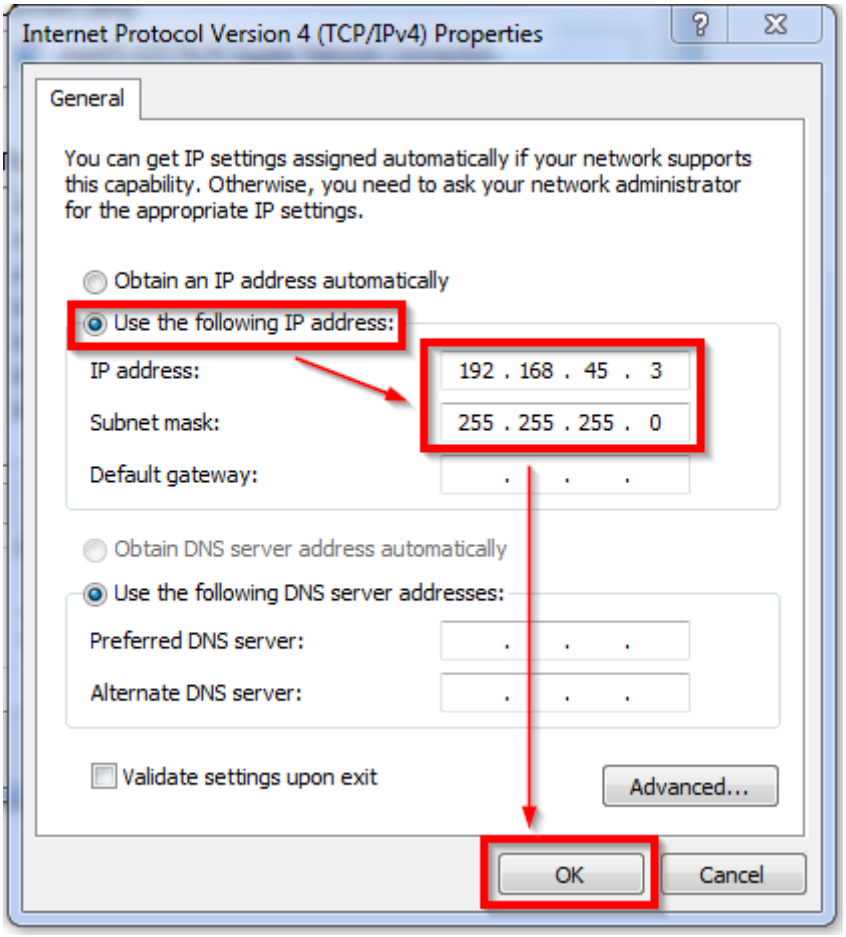


Figure 6 Change ip settings

Chapter 2 : The Web Interface

1. Layout

The following figure shows the default initial web page displayed after login (Site):

- The top menu gives access to other pages
- The left part shows the hierarchy of the component of the system (Site, DC System, Rectifier, etc.).
- The main content concerns the description of a site, comprising address, GPS position, etc. One can see the presence of different tabs (Description, Alarms, Events, Data, Records, Configuration), allowing to see corresponding values related to the selected tree node.
- The bottom part displays the date and the time, software information, login information, and language selection

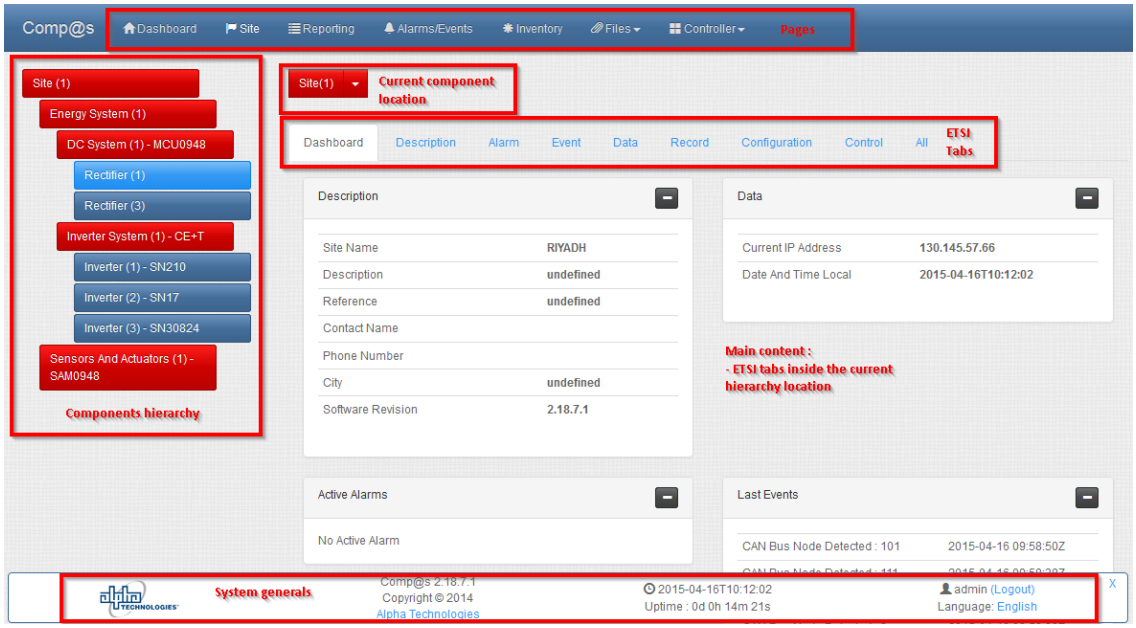


Figure 7 Page layout

2. Map

The website is structured as shown if the following diagram:

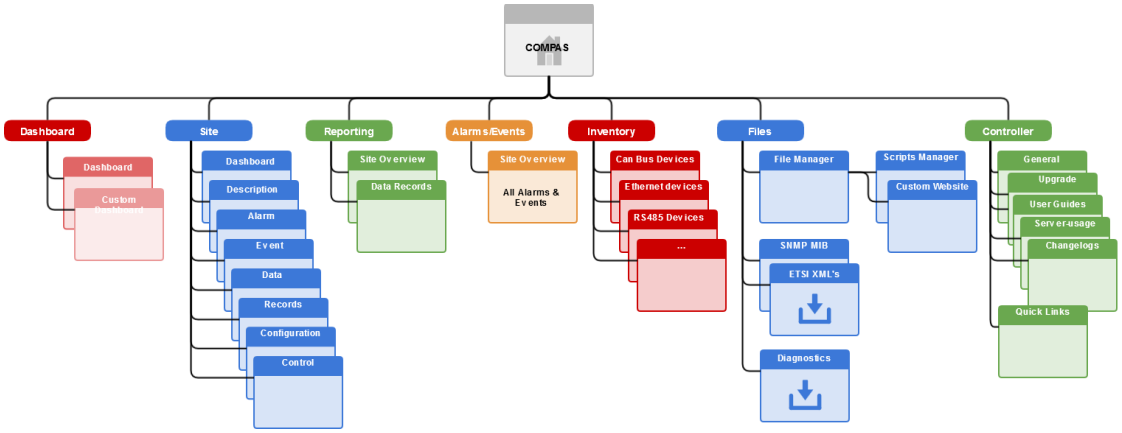


Figure 8 Site-map

The site page give you access to all your component data and actions. It is well organized into ETSI tabs.

Don't forget to select the right device before accessing into the ETSI tabs.

3. Navigation example

3.1. Access the rectifier 1's description

Your rectifier is in the DC System 1 of the Energy system of the site.

You can access directly to it by clicking on the hierarchy. The current location will change and you will be able to click on the Description Item.
Another way to access to the rectifier is to use the location drop-down. It is the standard way to access when you are using a smartphone.

Pay attention to be on the right location, if you are on another rectifier, the page look is the same.

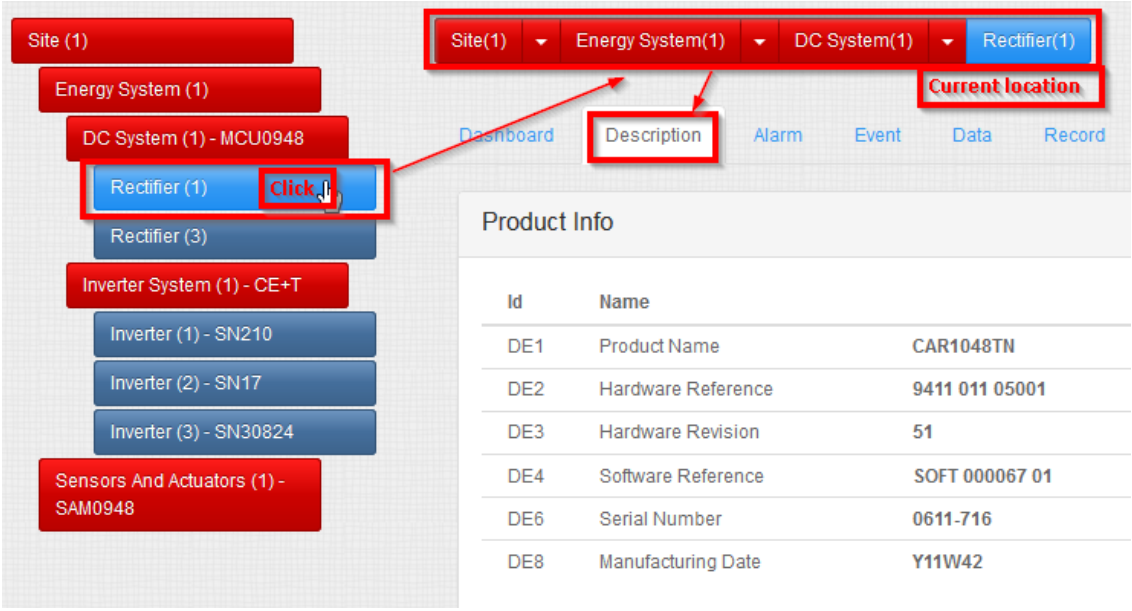


Figure 9 Using hierarchy from standard web-browser

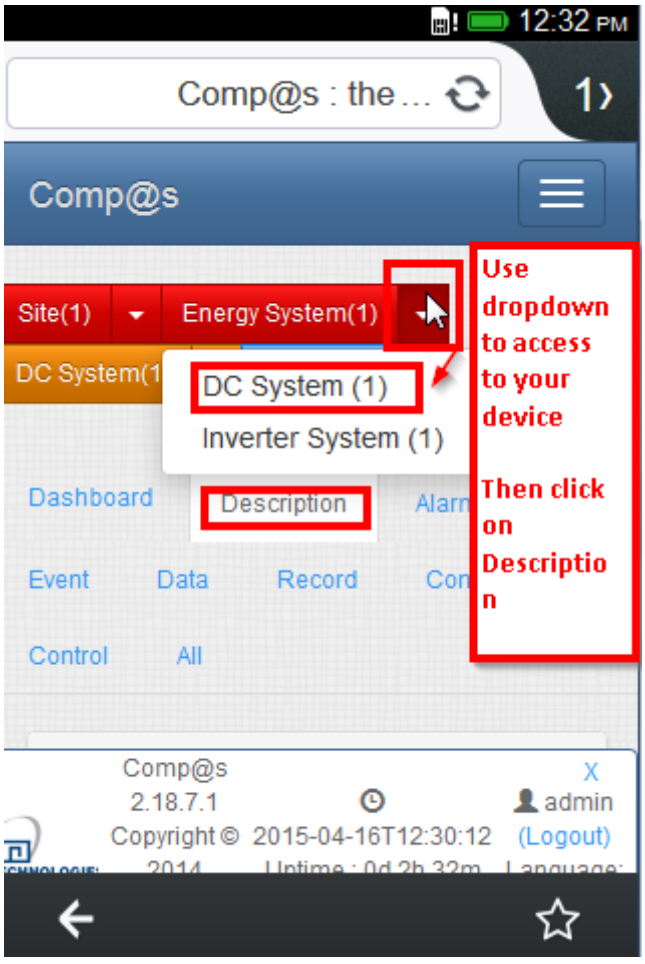


Figure 10 Smartphone lay-out and drop-down button

4. Some Useful information

4.1. Filter Concept

Sometimes, it takes time when you switch from different ETSI categories. (I.e. Change battery and launch a test) Compas has the solution: Using group and subgroup will help you to show only the information on a certain topic. In the following visual example, we will access to all the "time" related elements from the same page thanks to the filter button.

1. On site level, Click on the tab "*All*"

2. Select the time group in the filter drop-down

3. Now you have a view with all time-related elements. As you can see, you have Data information mixed with controls and configuration. That give you all information that you need on the same page.

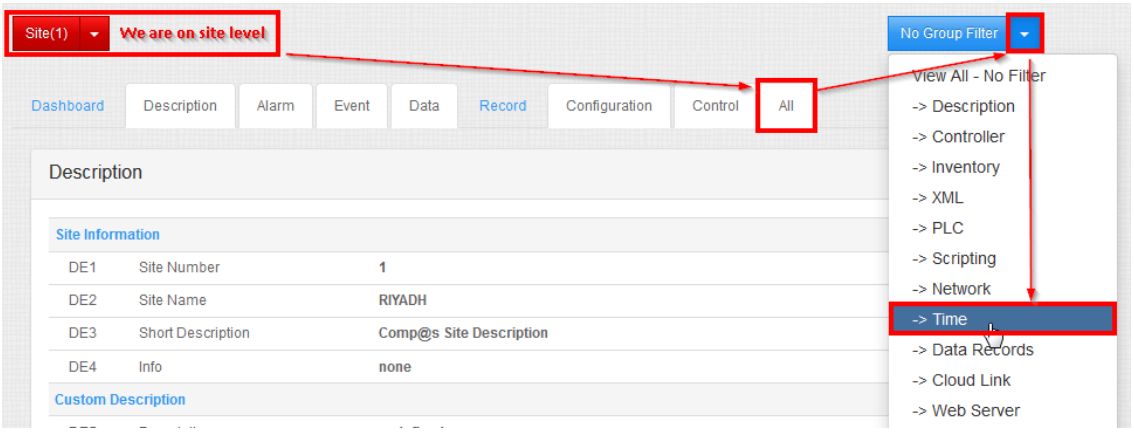


Figure 11 Filter concept - showing all

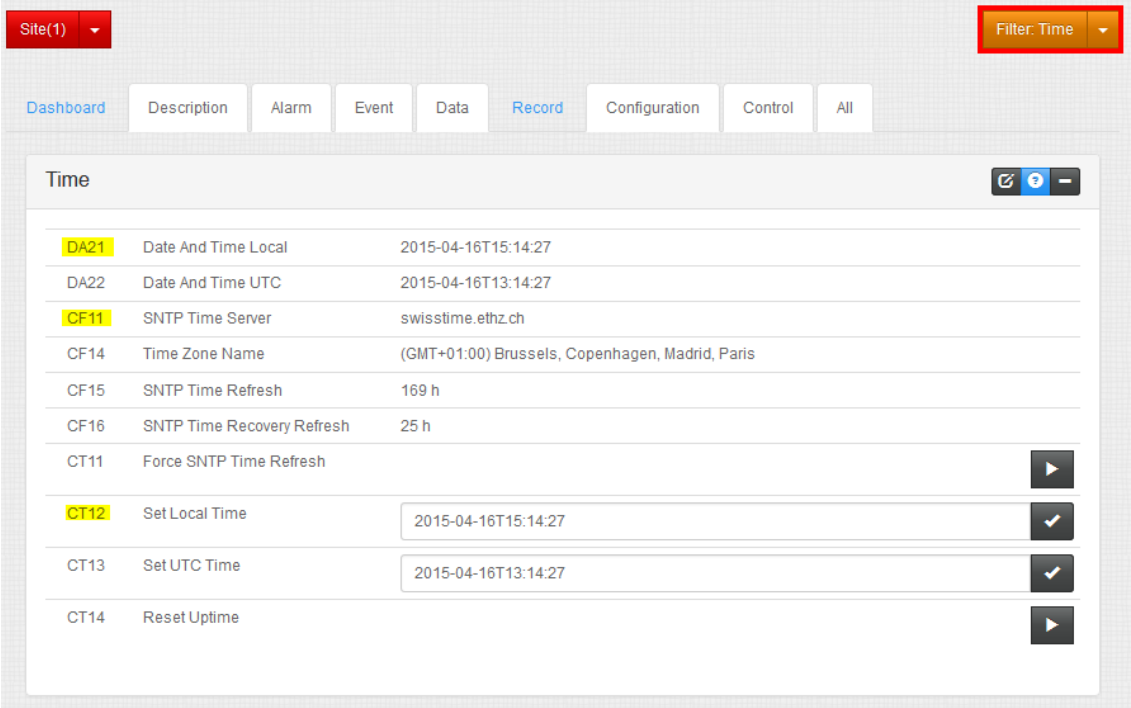


Figure 12 Filter concept - showing time information

4.2. Dashboard

It gives you important information about your device. On some systems, we even added a dynamic and visual dashboard to help you to understand directly what's happening.

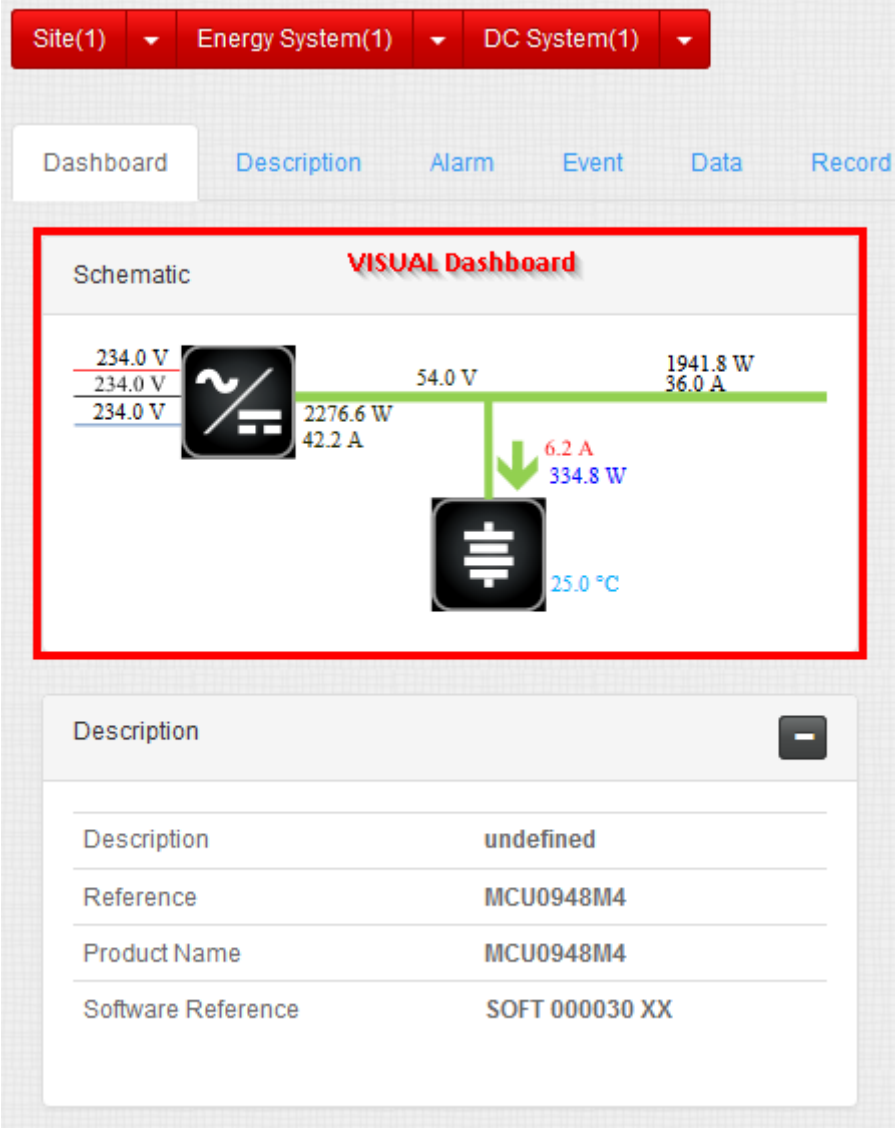


Figure 13 Dashboard

4.3. Alarms

With alarm panel, we have directly the information about the possible equipment issues. For example, in the following pictures, we can see directly that we have a problem with the battery:

- Battery breaker is open
- Battery LVD is open

This appends if the breaker is not ON.

Figure 14 Visual Alarm system

Now that you know the basics of the web interface, let's practice by setting description information of a system

Chapter 3 : ETSI & Compas principles

1. Introduction

The Compas user interface is a web-application. This has many advantages:

- OS independent
- Easy Remote Access
- Smartphone access with a responsive design
- Works on all standards and actuals browser

We are going to discover the basics of ETSI Standard. If you wanted to go further, please explore the appendix pages explaining ETSI Protocol.

2. Devices hierarchy

Each system or device is well organized inside a hierarchical tree. Systems are nested together using a logical and standard way (ETSI).

In this example, a site contain two main systems:

- Energy System
- Sensors And Actuators

The energy system is composed of :

- DC System containing multiples rectifiers
- Inverter System containing multiples inverters

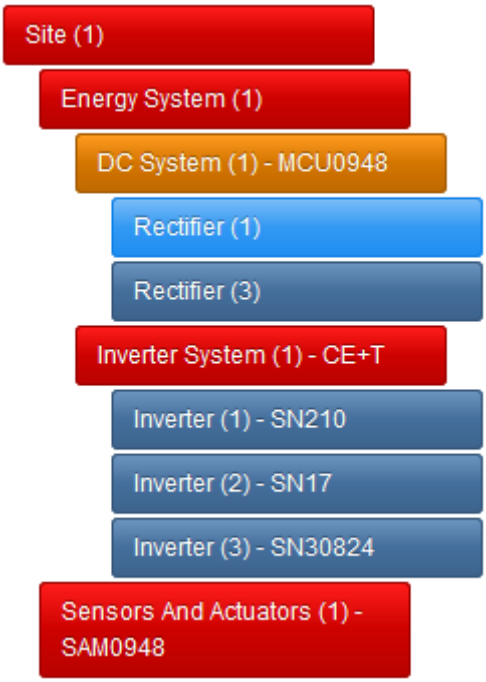


Figure 15 View of an Alpha system Tree

3. Equipment's elements

Each system, device or site has his own collection of description, alarm, events... Each category contains different elements that have a unique numeric ID.

	Example
Description	Contains descriptive elements of the current device.

	Example
	i.e. : • DE11: Product Name • DE16: Serial Number • DE18: Manufacturing Date, ...
Alarm	Contains alarms of the device (active & inactive) i.e. : • AL1 : DC Bus Extra Low • AL6 : Mains Failure • AL25 : Distribution Breaker Open
Events	Contains the events log of the system i.e. : • EV35 : Alarm set : Mains Failure • EV36 : Alarm set : Battery On discharge • EV37 : Alarm Clear : Mains Failure • EV38 : Control Executed : [id=1],[name=Back To Float],[value=1],[result=COMMAND_EXECUTED],...
Data	All the device data are listed in it i.e. : • DA10 : I1 • DA11 : I2 • DA21 : Total active power
Record	It is possible to make charts over data that are currently logged
Configuration	Configuration parameters allows you to set some set point or any other parameter (ip...) i.e. : • CF2 : IP address • CF3 : Subnet mask
Control	When you need to make an action and take the control. i.e. : • CT2: Start Battery Test • CT41: Reset Last Battery Test State

4. Compas Color code

In Compas, colors represent the severity of an alarm:

- Red: Major alarm
- Orange : Minor alarm
- Light Blue : Warning
- Blue : No Alarm

The equipment has always on the color of the most severe active alarm.

Chapter 4 : Initial configuration

At the end of this practical tutorial, you will be able to

- ✓ Set the description
- ✓ Set the time
- ✓ Adding a license key
- ✓ Change the IP address
- ✓ Be ready to discover the rest of compas

1. Changing the description of the site

Describing your site as much as possible is important, it gives essentials information for technicians and field people like cabinet localization, responsible phone number,... It helps for efficient intervention team and a smaller intervention time.

1.1. Interface modes

The first thing to know is that Compas has different mode of view.

			
Normal mode	Edition mode	Rename mode	Help mode

Table 1 Compas Interface Modes

You can change and visualize the current mode by clicking on the appropriate mode icon. Help mode can be combined with other mode; it gives you more information to help you in your choices.

1.2. Procedure to change the description of the site

Let's change some description elements

1. Navigate to *site-> description*

2. Switch to *edition* mode
   Most of the fields become editable

3. Change the parameters to fit to your information.
   When you change multiple parameters, a color code will help you to be sure that your parameter is validated :

- blank : no change
- orange : unsaved change
- green : change is saved
- red : an error occurred and your parameter is not saved

4. Don't forget the GPS Position! It could be really useful for a technician looking for a street cabinet. (And a link to google map will be added into the controller menu)
5. If you exit the edition mode, you will see that the change are effective on the running system.
6. **If you want to make persistent your changes, you need to save the configuration**
   To do that, click on controller then "*save configuration*". You will get the message "COMMAND_EXECUTED" confirming your action
7. **Well Done,** you just changed the description of your system and make the change persistent ! Now Let's configure the [the time of the controller] !

1.3. Visual Help

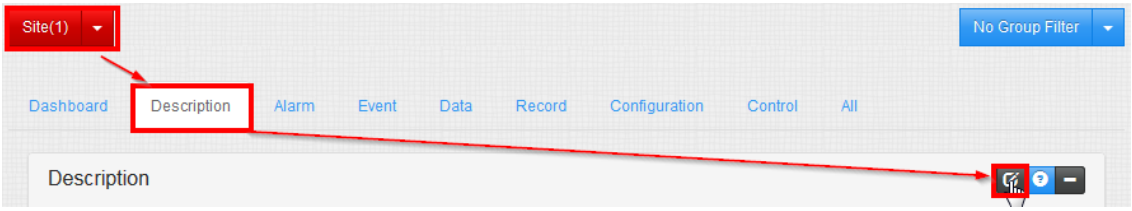


Figure 16 Navigate to description tab and switch into edit mode

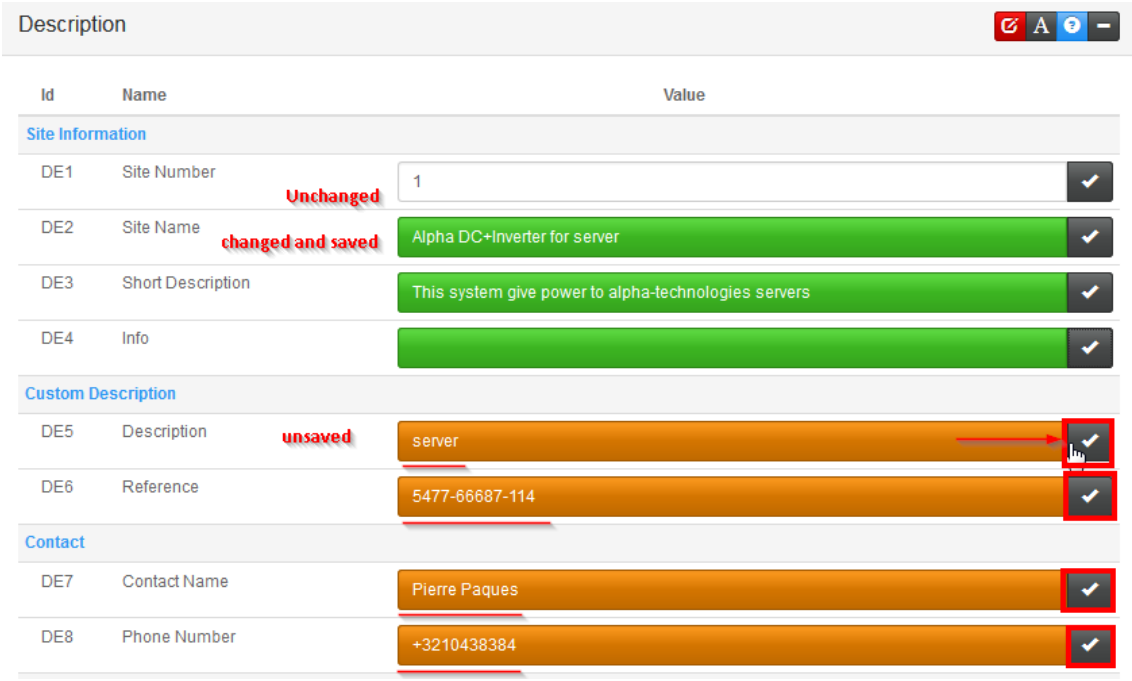


Figure 17 Change the parameters

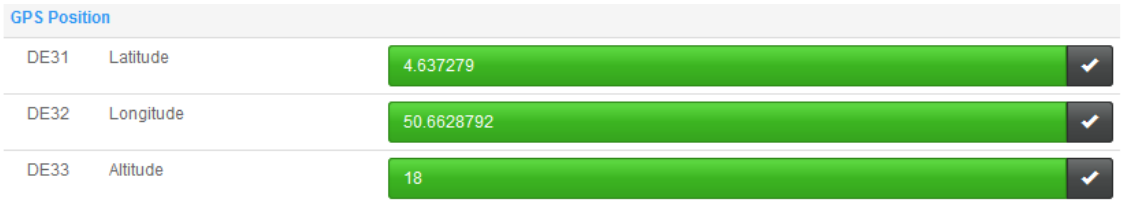


Figure 18 Set the GPS coordinates

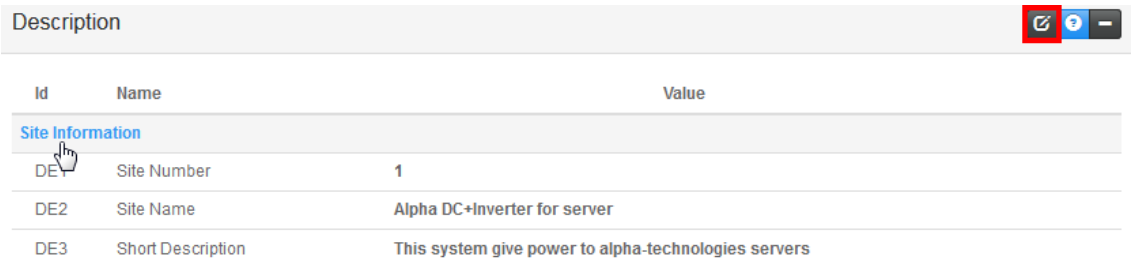


Figure 19 Switch into the normal mode

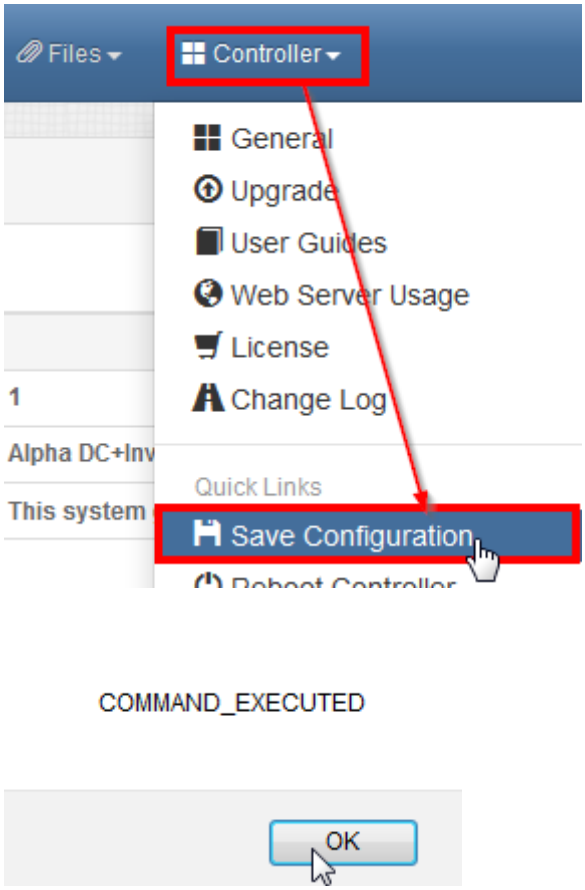


Figure 20 Save configuration

2. Setting the time of the controller

When you are using a system, it is really important to know when an event happened. The date & time is essential for a good usage of your device. Compas use a RTC (Real Time clock) in order to keep the time between power outage or moving the system but it has to be right configured for the first usage.

2.1. What time is it now?

You have multiple ways to find the system time. The first and easiest is to look on the bottom of the interface. The second is to look into site -> data -> DA21 & DA22. These two parameters will give you the local and UTC time.

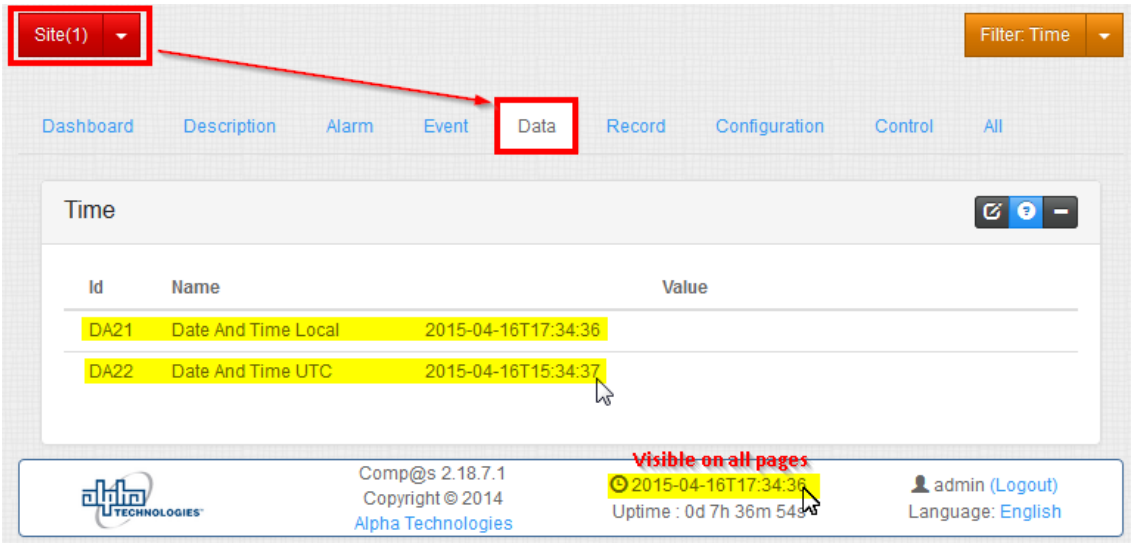


Figure 21 Reading the time of a system

2.2. Changing the time

For changing the time, we need a control because we are going to make an action on the system. Logically this control is located at the site level. Using the time modification control (CT12) is necessary to set the right time. Just navigate to controls inside the site, write the good date and time then validates.

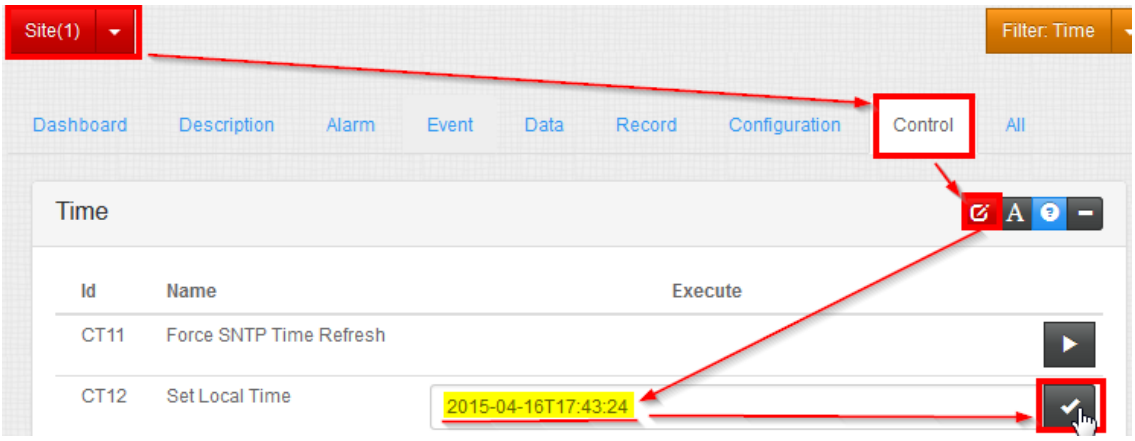


Figure 22 Setting local time

2.3. Other time Functions

Compas can also use a SNTP server in order to keep all your compas time synchronized with a server. It supports also time-zone and parameters to set the SNTP refresh time. I invite you to see the Time section if you want to know more about these functions. But, if you go to the parameters, you will certainly understand how it works.

2.4. Conclusions

Congratulations, your second change in compas is now effective. But let's see if you can add a license to your system.

3. Adding a license

When you receive your system, you have usually the professional license (or basic on older system). We changed recently the Licenses options to give you more and a best user experience.

Each system has his own unique license that is linked to the hardware of your device. Licenses are not "time based", it is functionality based. If you need to upgrade your license, just send us the site.xml file (available in Files -> Site.xml) and ask us the new license that you want. You will receive a file that you have to put on the Compas. To do that you have two ways:

- Via the web interface (in this tutorial)
- Via USB
- Via FTP

3.1. What are my licenses options

In Compas, almost everything is available using ETSI Structure, you can easily use the site -> data -> DA11 (Licensed Options). But well it is a little more complicated so we have made a dedicated page accessible in Controller-> License. On this page, you have the details of your licenses.

As you can see on the picture below, we have the professional License (including the older licenses basic, standard, battery and asset) and our License key is valid. This page gives you also the possibility to add a better license.

Well that seems easy let's practice a little.

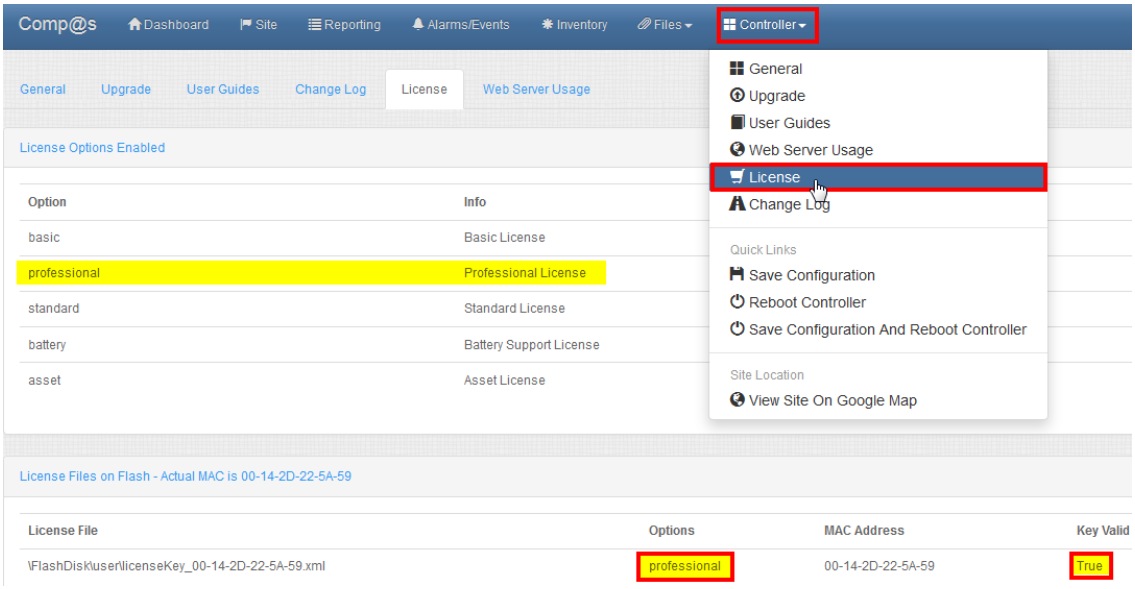


Figure 23 Read my current license

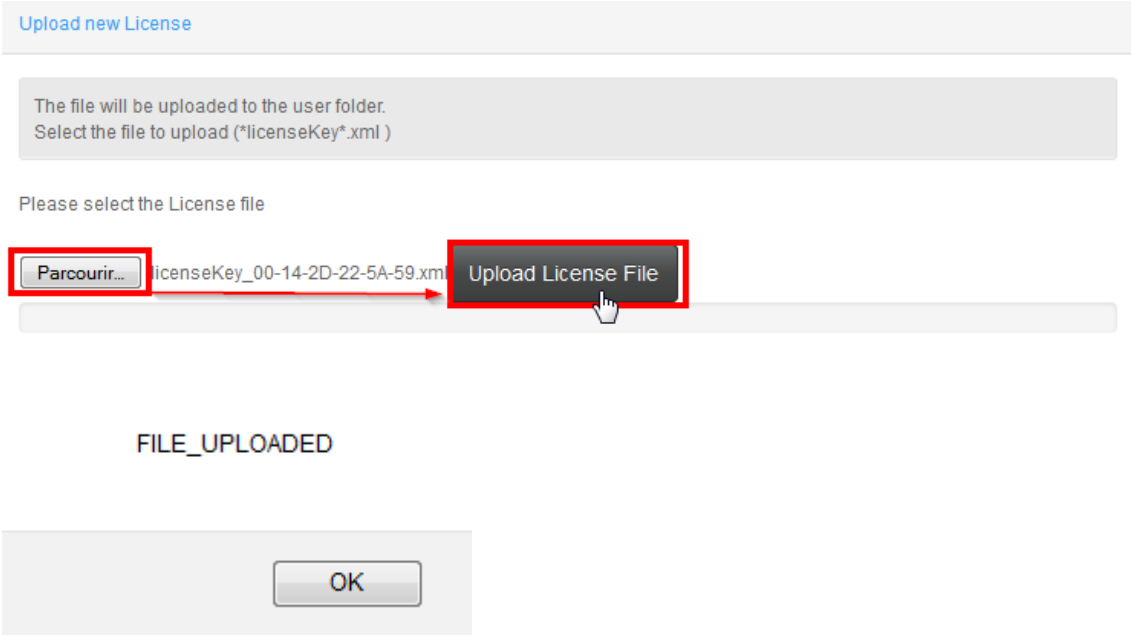
3.2. Getting the new License

If you already have a license file, you can skip this step.

Let's get your site.xml license and ask to alpha-technologies a new license. To do that, just download the file site.xml site ->site.xml and send it as an attachment to support.Compas@alphatechnologies.be, don't forget to give us your billing information and the license that you want or evaluate. You will rapidly get your new license. In this example, we will get the Ultimate Compas License.

3.3. Adding the license

On the License page (Controller -> License) , there is a small form where you can update a file. Just put your new license file into the file dialog and click on Upload License File. You will get the response "FILE_UPLOADED". After that, you will have to restart your device in order to activate the new elements of your license. You should use "*Controller -> Save configuration & Reboot Controller*". After a few seconds, the system will reboot and your license key will give you access to additional features.



3.4. Congratulations

Congratulation, you made it. Just take a coffee (or Tea) to get ready before the next step: Changing the Network Configuration

4. Changing the Network Configuration

By default our system is configured with a static ip (192.168.45.2), you will certainly not use this address on your production site.

As we don't want to lose the communication with the system during the configuration, an IP modification is a little trickier than modifying another parameter. In order to change the parameters, you have two possibilities:

- save configuration and reboot (the new IP will be set at the boot time)
- apply network configuration (don't forget to save your change to make it persistent.)

Do not insert space or other data than a valid ip address in the configuration box.

4.1. Let's work!

1. Browse to Site --> All, and filter on Network
   The configuration parameters are available in Site -> Configuration. But let's use the tips seen before (filter by group). Use the "all" tab filtered with group '**Network**' to see live related data and control at the same time.

2. Switch to edit mode and configure your new IP. (your changes are not effective immediately)

3. Apply the change

    a. Method 1: reboot
    Use the function "Controller -> Save and reboot".

    b. Method 2: Apply the change intermediately
    To apply the changes, use the control CT6 : 'Apply Network Configuration'.

4. Check the parameter

    a. If you are connected using usb, the data DA1 'Current IP Address' will change and show you the new address.

    b. If you are connected using Ethernet, you have to change your computer IP address to match with the new Compas IP. Then you will be able to reconnect verify the configuration

    c. If site -> DA1 (Current IP Address) is empty or 0.0.0.0, it means that there is no network available.

    d. Everything looks right? Let's make our change persistent

5. If you used the method 2, you need to save the configuration to make your changes permanent. Otherwise, it will be lost after a reboot. (Top Menu: Controller --> Save Configuration).

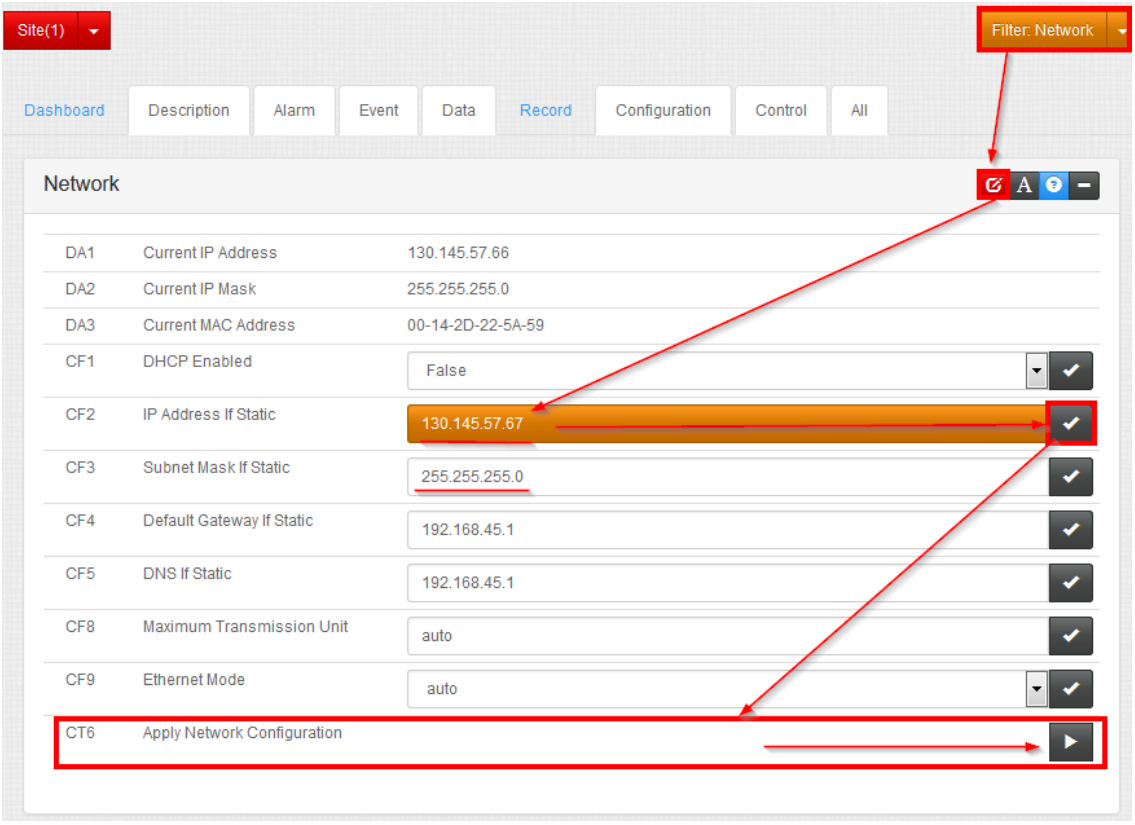


Figure 24 Changing system IP and validate it

5. Congratulation

You just finished the quick start guide practical exercises. Now you know the Compas fundamentals.

Compas can do a lot more, just use the user guide to discover others functionalities.

Chapter 5 : Support and Help

1. On-board help

At any-time, when you are on a field system without the manual, you could use the embedded help. It will give you some extra information to help you to understand what append, what is the meaning of a parameter... It is really useful and can help you in most of cases.

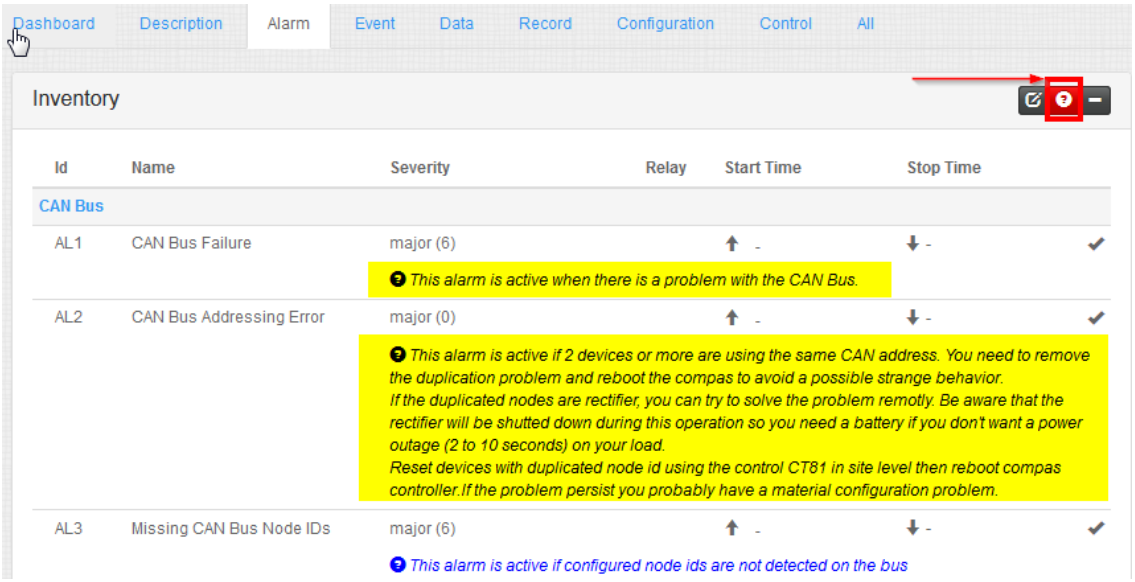


Figure 25 On-board help

2. Going Further

If you want to know more, you should read and experiment some functionalities. Don't hesitate to read the advanced battery management or the booting system. Our well-documented API will also help you to go further.

Functionalities like cloud link could also help you to save a lot of money.

Last but not least, the advanced scripting capabilities and PLC is a must read in order to profit of the Compas flexibility.

3. Alpha-Technologies direct support

Our technician team is ready to answer to any question. Just email us (support.compas@alphatechnologies.be) and we'll answer you as soon as possible.

4. Suggestion?

You have some suggestions, comments about compas? Just email us (support.compas@alphatechnologies.be). We are open to customer's suggestion and we can implement a missing functionality (if we think it is needed).