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1. Introduction

The Libelium's Services Cloud Manager (SCM) is a complete visual tool, designed with our customers in mind. Anyone can create a new account in the SCM to discover all the services available to ease the task of getting our devices up and running.

Building on the experience and feedback gathered over the years, the new site provides all the functionality needed to manage the Libelium devices. Online programming and data visualization are some of the features provided. The Programming Cloud Service (PCS) is available for Plug & Sense! nodes, and the MySignals Cloud is available for MySignals devices. Services oriented to Meshlium and Smart Parking nodes will be also available.

This guide explains how to use the SCM website and all the features it provides.
2. Accessing the Services Cloud Manager

You can access the Services Cloud Manager (SCM) at cloud.libelium.com.

Figure: SCM home page
2.1. Creating an account

To register and set up a password, go to cloud.libelium.com/register and click on “Create account”.

Complete the information in the form (all the fields are mandatory):

- Name: Your name
- E-mail address: A valid e-mail address, it will be used for verification purposes
- Password and Confirm password: Set your password

Accepting Terms & Conditions is also mandatory to create a new account in the SCM.
2.2. Signing in

To sign in the SCM, go to cloud.libelium.com and click on the “Sign In” button.

Figure: “Create account” and “Sign-in” buttons

Complete the information in the form. The e-mail and password used when creating the account will be required:

- E-mail address: E-mail address used for registration
- Password: Password used for registration

Figure: Sign-in form

The Terms & Conditions accepted when creating the account apply for any time you sign in the SCM.

If do not have an account yet, follow the steps described in the section “Create Account” to obtain valid credentials.

If you already created an account and need a password reminder, you can click on “Forgot password?“.
3. Using the Services Cloud Manager

The SCM offers 3 main functionalities: devices management, services management and licenses management. These utilities are oriented to get the maximum value of your devices in the minimum time of development, achieving optimal results in terms of reliability and quality for your IoT projects.

Devices are shown on the “Devices” panel once the user gains managing permission (by activating the devices, or though the share and claim processes). Our customers will receive the activation codes needed to activate the purchased devices. Several actions like registering, sharing, claiming and programming are allowed in the devices panel.

*Note:* The activation process for MySignals devices is described on the [MySignals technical guide](#).

All services available in the SCM services panel rely on any of our devices.
Licenses are required to enable any of the SCM services which are linked to the devices.

3.1. Guidance tour

When accessing for the first time to your SCM account, a guidance tour offers a complete explanation of the steps to get your devices properly configured and running.

It is very important to follow this tour carefully to understand the best way to start using the SCM.
3.2. Device management

The “Devices” menu offers an easy way to organize and manage your products. 3 sub-sections are available: “My Devices”, “Shared with me” and “Claimed by others”.

The devices are grouped by family. Each family has a set of actions and features associated. The actions available for each device are determined by its family.

Each section corresponds to the main actions to do with one device: register your own devices, share your devices with other users and claim some devices to other user. The 4th action you can execute is the programming a device.

Start managing your devices by clicking “Devices” on the left bar or with the direct link cloud.libelium.com/account/devices. The first section (“My Devices”) is shown by default; it contains the complete list of devices for which you have management permission.

All tables are empty when accessing the SCM for the first time. You will need to add your devices using the activation codes provided (you can also gain management permission to devices through the share and claim processes).

3.2.1. Getting devices on your SCM account

Each family of devices follows a different method to register and associate the device with your account.

3.2.1.1. Getting Plug & Sense! devices on your SCM account

Every device has a unique Single Activation Code assigned to it. This code is required to add devices to the “My Devices” panel.

Also, every Sales Order has a unique Group Activation Code, using this code when adding devices to the “My Devices” panel will add all the devices in the order at once.

An e-mail containing all the activation codes for each Sales Order is sent to our customers. If you have not received the activation codes of your recently purchased devices, ask your Sales agent to obtain them.

There are 3 ways to get devices on your SCM account. Let’s explain them.

The user that enters the activation code for the first time becomes the owner of the device and gets full management permission. The device will never be used by other users. This is the most common way to gain ownership of the device, and the easiest and most immediate method.

*Figure: Normal process*
A 2\textsuperscript{nd} way of gaining management permission is the “share process”. It is useful in certain cases: the share process was mainly implemented for those Libelium’s customers who want to manage one device among a group of people (probably developers in the same company). The original user can enable other users of the SCM to access the device with the share process. They all need to have their own accounts. Sharing a device allows other users to program it, but the ownership of that device is kept by the original owner. See the diagram below for a better understanding.

**Figure: Share process**

**Note:** Developers who want to use the same device can consider simply using the same SCM account instead of implementing the share process.
And the 3rd way of gaining management permission is the "claim process". It is useful for certain cases too: the claim process was mainly implemented for those Libelium's customers who buy devices, manage them, and then resell the devices to another company. A user who enters the activation code of a device which has been previously activated by another user, will start the claim process in the SCM. The 2nd user only needs the activation code for claiming a device to the current owner. When the original owner accepts the claim of the 2nd user, the full ownership is transferred from the 1st user to the 2nd user. See the diagram below for a better understanding.

![Claim process diagram]

Note: Libelium's customers who resell devices to their customers can consider simply NOT entering the activation codes in the SCM. This will avoid that their customers need to start the claim process. Remember that user that adds the device for the first time gets the ownership of the device.

3.2.1.2. Getting MySignals devices on your SCM account

You can only have one device associated to your MySignals license, and you can only have a MySignals license associated to your account. You can upgrade your license anytime to raise the current use limits of your account.

Before adding your device to your SCM account, you need to associate the device to your license. This step is done with the official MySignals smartphone app, available for both iPhone and Android platforms.

- Log in on the smartphone app with your SCM credentials
- Turn the MySignals device on; the smartphone's Bluetooth interface needs to be on too
- The MySignals app will show a list of the available Bluetooth devices
- Select your MySignals device from that list

The app will add the device to your account. If you have a device previously associated to your account, an error message will be displayed.
3.2.2. User’s devices

This section explains the actions available to work with devices: list, add, share, program and customize.

The main view of the “My Devices” panel is a table listing all the information related to the devices.

Columns description:

- Batch: Check-box to select several devices to perform a common action. This feature is only available for the Plug & Sense! family with Elite licenses.
- Serial: Unique serial ID for every single device.
- Family: The family that the product belongs to (Plug & Sense!, Smart Parking, MySignals, Meshlium).
- Name: Editable field to assign a name to the device.
- Project: Editable field to assign a project name to group the devices.
- Description: Editable field to assign a description to the device.
- Shared with: Field showing the users that the device is shared with. This feature is only available for the Plug & Sense! family.
- Actions: Icons showing the available actions for the devices.

You have the option to see a filtered list of devices. You can filter by any column, you just need to type the text or numbers in the “Filter results” box.

Figure: My Devices

Figure: Filter devices displayed
3.2.2.1. Adding devices

In order to use the cloud services associated to your devices, first you have to add the devices to your account. The steps are different for each family.

3.2.2.1.1. Adding Plug & Sense! devices

Click the “Add Device” button to add new devices to the SCM. Registering new devices is a 2-step procedure: enter a valid Activation Code and confirm the action.

Entering a Single Activation Code will register one device, while entering a Group Activation Code will register all devices belonging to the same Sales Order.

Figure: Add device: enter activation code

When the process is finished successfully, a message will show that the device has been correctly added to the “My Devices” panel confirming the ownership of the device.

Figure: Success message
Using the Services Cloud Manager

If the process cannot be finished correctly, a message will notify the error, for example “Invalid activation code: please check that the activation code typed is valid”.

![Error message: invalid activation code](image)

Figure: Error message: invalid activation code

- Activation code previously used: the device will appear in the “My Devices” panel with a status of “Transfer pending” in the action column. The current owner of the device will be notified about another user claiming for the ownership of that device. The pending transfer device will also appear in the current owner “Claimed by others” panel so the current owner of the device may accept or reject the ownership of the device.

![Transfer pending](image)

Figure: Transfer pending

3.2.2.1.2. Adding MySignals devices

Once you have associated the device with your license, you do not have to perform any additional step to add the device to your account.

You can check if the device has been added correctly to your account: log in your SCM account, go to the “Services” page and click on the “Manage Data” button of your MySignals license. Once inside the MySignals Cloud, you can visualize the data sent by your device.

3.2.2.2. Managing owned devices

Adding devices procedure will register devices in the “My Devices” panel, available actions for the devices listed in the “My Devices” table will be shown in the “Actions column” as icons.

- **Go to service:** Any device has a service associated, click the “Go to service” icon to open a new tab with the service associated.
- **Batch programming:** It is possible to select several devices to perform a common action. This feature is only available for the Plug & Sense! family with Elite licenses.

![Batch selection](image)

Figure: Batch selection

Refer to the Programming Cloud Service guide to understand how to program nodes using this tool [libelium.com/development/cloud-services](libelium.com/development/cloud-services).
• Share Device: you have the option to share your device with another SCM user. Select the device to share, enter the e-mail of the user and the system will automatically share the device with the user registered with this e-mail. You can revoke shared devices whenever you want pressing the cross arrow next to the user e-mail in the “Shared with” column.
Using the Services Cloud Manager

When the process is finished successfully, a message will show that the device has been correctly shared with the other user.

If the process cannot be finished correctly, a message will notify the error.

The shared device will appear in the “Shared with me” panel in the account of the other user.

- **Stop sharing Device**: you have the option to revoke the permission to any of the users the device is shared with. Click on the cross icon next to the e-mail and a confirmation dialogue will appear. If you press OK, you will revoke the shared and the other user will not be able to program the device.

- **Customize identification fields**: click the “edit pen” to customize a field value.
  - **Name**: User friendly names could be used to tag nodes.

---

*Figure: Success message*  
*Figure: Error message*

*Figure: Stop sharing confirmation dialogue*

*Figure: Customizable fields — Name, Project and Description*
- Project: Group your nodes giving this field a common value.

![Figure: Customizable fields — Project]

- Description: Explain specific features related to each node.

![Figure: Customizable fields — Name, Project and Description]
3.2.3. Devices shared with me

**Note:** This feature is only available for the Plug & Sense! family

The “Shared with me” panel shows the devices that other users have shared with you. The ownership of a device implies having a valid activation code and using it to add the new device to the “My Devices” panel. But ownership is not needed to work with devices. Different accounts of the SCM can work with the same devices. Also, the ownership of a license is linked to a SCM account, not to the device ownership.

The owners of a device can share it with other users registered in the SCM. Sharing a device will allow to the other users to work with them, without modifying the ownership of that device: ownership will be kept by the current owner.

*Figure: Share process*
The main view of the “Shared with me” panel is a table listing all the information related to the devices that other users decided to share with the current user account.

You can also filter or search devices.

3.2.3.1. Managing borrowed devices

This section offers also the possibility to program the borrowed devices (already explained) or deleting them.

- Delete device: you have the option to delete a device shared with you: you voluntary regret to continue with access to this device. The owner of the device will be notified about this event.
3.2.4. Devices claimed by others

**Note:** This feature is only available for the Plug & Sense! family

The “Claimed” panel shows the devices which ownership has been claimed by other users. The current owner needs to accept or reject the transfer of the devices that have been claimed.

You can also filter or search devices.
3.2.4.1. Claimed devices

**Note:** This feature is only available for the Plug & Sense! family

This section offers the possibility to accept or deny the ownership of the device to the users claiming for it.

Transferring the ownership of a device means to totally lose control of that device. Since activation codes are linked to the serial ID of every device, you could use the valid activation codes in the future, but the current user will always need to accept or deny any ownership claim in order to restore the ownership.

![Claimed by others actions](image)

**Figure: Claimed by others actions**

- **Accept**: If the current owner accepts the transfer, the ownership of the device will be transferred to the user who claimed the device. The device will disappear from the list of devices of the old owner and the possibility to program or share it. Now, the owner will be the user who claimed the device.

- **Deny**: If the current owner of the device deny the transfer, the operation for transferring will be aborted.
3.3. Services management

The “Services” panel displays the services available in the SCM. Services allow to work with your devices and are developed specifically for the different device families in Libelium’s ecosystem:

- Plug & Sense! devices have a service to program them (Programming Cloud Service)
- MySignals devices have a service to manage the data associated to the device (MySignals Cloud)
- Other products like Smart Parking or Meshlium will benefit from new services soon

All services listed are disabled by default until a valid license is obtained. When you register a license and add a device, you will be able to use the services on the device.

The relationship can be explained with this simple expression: Device + License = Service.

All services have several parameters of use, the limits for each parameter values are linked to the different license plans available for each service.

It is really easy to start managing your devices, just go to cloud.libelium.com/account/services and activate your service.

3.3.1. Programming Cloud Service

In the PCS menu, you will see all the information of the licenses available alongside of their usage information. The services offered by a license could be active or inactive. Only one license can be active in a given moment. The active license is the one with the title “In use” and background in green, whilst an inactive license will have the title “Available” and background in gray.

PCS licenses parameters are:

- Activation date: Day when the license has been activated.
- Type: Type of license. It can be Basic, PRO or Elite.
- Number of nodes: Number of nodes that you can operate with this license. Each time you select a new device, not previously operated with this license, the count of available nodes will be reduced.
- Time remaining: Days remaining until the expiration date of the correspondent license.
Using the Services Cloud Manager

License actions

- **Use this License**: Immediately, the service provided by the license will be active. You will be able to use the services provided by the license on all the devices available to you. The use will be deducted only from the active license (except “Time remaining”).
- **Extend Period**: Extend the period of use of your license. The time period is calculated from the purchase of the license.
- **Upgrade**: Upgrade the type of license. Upgrade a license is only possible if you have not reached the most advanced license type available.

Using the service

Click the “Program nodes” button to go to the Programming Cloud Service (PCS). The options available will correspond to the type of the license currently active for the service.

The PCS lets you create new binary programs for any Plug & Sense! v15 device. You will be able to select different parameter options to adjust the 3 main actions: read, send and sleep. This way, the user can effortless adapt the device behavior to fit their needs.

For more information about the PCS, please check the user guide: [libelium.com/development/cloud-services](http://libelium.com/development/cloud-services).

3.3.2. MySignals Cloud

In the MySignals section, you can see all the details of your license, with its use information.

The parameters of the MySignals licenses are:

- **Type**: Type of license. It can be User or Developer and for both types can be Basic, PRO or Elite.
- **Members**: Number of members you can create with this license. You can manage your members on the MySignals Cloud.
- **Departments**: Number of departments you can create with this license. You can manage your departments on the MySignals Cloud.
- **DB Storage**: Storage used with your this license in the database.
- **Time remaining**: Days remaining until the expiration date of the license.
License actions

- Extend Period: Extend the period of use of your license. The time is calculated from the purchase date of the license.
- Upgrade: Upgrade the type of license. Upgrading a license is only possible if you have not reached the most advanced license type available.

Using the service

Click the “Manage data” button to go to the MySignals Cloud.

The MySignals Cloud displays all the data gathered by the associated device and manages your members and departments.

For more information about the MySignals Cloud, please check the MySignals Technical Guide.
3.4. Licenses management

The "Licenses" section gives control of the licenses for the SCM. Licenses enable services for your devices. The “My Licenses” panel lists the currently active licenses and the historic data of all the expired licenses. If you recently purchased a License, go to the “Get Licenses” panel to enter its activation code.

License activation codes are unique and only one use is allowed (one license only applies to one user, to one account). Despite the ownership of one device can be transferred (and one device can be managed by several users), the ownership of a license cannot be transferred.

Any license has an expiration time associated to it. It is important to note that time starts running from the moment the user activates it by entering its activation code (after entering the activation code of a license, it may be required to activate it in the “Service” panel).

If the user has one active license and activates a new one, time keeps running for both the old and the new licenses (in other words, time is never paused).

3.4.1. User’s licenses

The “My Licenses” panel shows the licenses and the status of each one. The “Active” tab shows the list of the licenses which are currently active, and the “Expired” tab shows the list of previously used licenses.

![My Licenses](image)

The information displayed is:

- License ID: Identification number
- Service: Service and type provided by the license
- Activated: Date of activation
- Expires: Date of expiration
3.4.1.1. Extending the license period

The expiration date may be extended selecting “Extend Period” button.

3.4.1.2. Upgrading a license

You may extend features by upgrading the license to more advanced license types.

Upgrading a license to another plan is only possible if you have not reached the most advanced type which is available. Detailed information about the licenses types is available in the “Get Licenses” panel.

3.4.2. Getting new licenses

When the user purchases a new license, the “Get Licenses” panel allows to enter the activation code associated to this new license. Activation codes are received by the user via e-mail after the purchasing process is finished.

Figure: Activation e-mail received after purchasing a license

Thank you choosing the Libelium Cloud Services.
You have purchased the following license:
- License: PCS Pro
  - Activation code: b45ab842-d2c3-3fe3-8058-bcd7ea24b454

With the license’s activation code, now you are ready to associate this license to the devices that you want to manage and program.

To activate the license follow the instructions in the section “1.3.4. Activate the license in the SCM” in the Libelium Services Cloud Manager Technical Guide.

After activating your license you can start using the Programming Cloud Service (PCS).

Download the PCS Technical Guide to take the full advantages of this service.

Remember that from now all your services will be available from the new Libelium Services Cloud Manager.

If you need further information, please, contact our Sales Team

Thank you.
The Libelium team.
3.4.2.1. Adding a license

Registering a new license is a 2-step procedure: enter a valid license activation code and confirm the action.

- Entering a Single Activation Code will register one license. A Group Activation Code will register all devices belonging to the Sales Order, but not the licenses it may contain.

Figure: Adding a license

Figure: Add license: enter activation code

Figure: Add license: confirmation
The SCM will validate the activation code, displaying a visual confirmation. When the process is finished successfully, a message will show that the license has been correctly added to the “My Licenses” panel.

Figure: Success message
If the process could not be finished correctly, a message will notify the error. For example, “invalid activation code: please check that the activation code you entered is valid”.

![Error message](image)

**Figure: Error message**

The “Get Licenses” panel shows information about the licenses types for each service, click on any of them to purchase new licenses.

**Cloud Services**

**Basic License**
- 5 nodes to program
- All PASI models supported
- All Sensors supported
- Actuators Control (Relay ON/OFF in PASI Security)
- Sigfox / LoRaWAN Settings Setup
- 802.15.4 / RF 868/900MHz Settings Setup
- 4G / WiFi Settings Setup
- GPS settings setup
- HTTP (4G / WiFi)
- HTTPS (4G / WiFi)
- RF Link Encryption (802.15.4 / RF 868 / 900)
- AES 256 Payload Encryption
- Industrial Protocols Support (ModBus/CanBus over RS232/RS485)
- Low Battery Warning
- Templates Manager
- Batch Programming (Generate up to 100 binaries in one click)

**Pro License**
- 20 nodes to program
- All PASI models supported
- All Sensors supported
- Actuators Control (Relay ON/OFF in PASI Security)
- Sigfox / LoRaWAN Settings Setup
- 802.15.4 / RF 868/900MHz Settings Setup
- 4G / WiFi Settings Setup
- GPS settings setup
- HTTP (4G / WiFi)
- HTTPS (4G / WiFi)
- RF Link Encryption (802.15.4 / RF 868 / 900)
- AES 256 Payload Encryption
- Industrial Protocols Support (ModBus/CanBus over RS232/RS485)
- Low Battery Warning
- Templates Manager
- Batch Programming (Generate up to 100 binaries in one click)

**Elite License**
- 100 nodes to program
- All PASI models supported
- All Sensors supported
- Actuators Control (Relay ON/OFF in PASI Security)
- Sigfox / LoRaWAN Settings Setup
- 802.15.4 / RF 868/900MHz Settings Setup
- 4G / WiFi Settings Setup
- GPS settings setup
- HTTP (4G / WiFi)
- HTTPS (4G / WiFi)
- RF Link Encryption (802.15.4 / RF 868 / 900)
- AES 256 Payload Encryption
- Industrial Protocols Support (ModBus/CanBus over RS232/RS485)
- Low Battery Warning
- Templates Manager
- Batch Programming (Generate up to 100 binaries in one click)

**Figure: Offered plans**
4. Services Cloud Manager upper bar

The upper bar of the SCM offers 4 options: Profile, Documentation, SCM applications and Notifications.

4.1. User profile

The user icon on the upper bar has the options for managing your profile modifying personal data, navigating to the home page or logging out the system.

Figure: User Menu

4.1.1. Modifying the profile

These optional parameters can be configured:

- **Company**: Company name
- **Phone**: Telephone number

Click the “Update your password” button to reset the current user password.

Figure: Personal information and privacy

4.1.2. Home page

Click the “Home” button to navigate to the main SCM page.

4.1.3. Log out

Click the “Logout” button for logging out from the SCM.
4.2. Online documentation

The book icon on the right of the upper bar has useful links for our products and services.

Click the icon and select the product or service to access the technical guides.

4.3. Service list

This menu contains a list with links to all the services that the SCM offers.
4.4. Notifications

To access the “Notifications” panel, click the bell icon on upper bar or click on “Notifications” on the left bar. In both cases, the total number of unread notifications is shown inside a circle.

The “Notifications” panel shows events related to your devices, licenses and services. This panel will show the inbox list of the messages received with information related to activating and sharing devices, activating and expiring licenses or service usage in your account.

![Notifications Panel](image)

The “Notifications” panel shows a list with all the events. Each event has these fields:

- **Source**: Event source (System or user)
- **Mail**: User mail
- **Message**: Description of the event
- **Created at**: Event date
- **Actions**: The user can mark the event as read or delete it

You can search or filter the notifications and order the columns.

The available actions for each notification are shown in the “Actions” column as icons:

- ![Change read status](image)
  - Change read status: Mark the notification as read or change it back to the unread status.
- ![Delete](image)
  - Delete: delete notification

Documentation changelog

- From v7.0 to v7.1
- Added descriptions for the new MySignals Cloud service
5. Documentation changelog

From v7.0 to v7.1

- Added descriptions for the new MySignals Cloud service