

Welcome Aboard!

Welcome to SYNAISTHISI, an integrated IoT platform that allows humans, systems, machines and devices to **create, manage** and **share** IoT services, featuring a wide spectrum of applicability to research and business areas. [1].

Getting Started

1. Register

*First of all, let us show you how to **Register** to our platform, if you haven't already done so.*

Either click [here](#), or press the "Register" button at the top right corner of the SYNAISTHISI [home](#) page, to get started!

What you see in front of you, is our **Register** page.

Email

Username

Password

Terms of Use

SYNAISTHISI IoT Platform

1. General Information Regarding These Terms of Use

Welcome, and thank you for your interest in the SYNAISTHISI IoT Platform.

2. Your Agreement to the Terms

BY CLICKING “I ACCEPT” OR OTHERWISE ACCESSING OR USING ANY OF THE SERVICES (INCLUDING THE LICENSES, PUBLIC DOMAIN TOOLS, AND CHOOSERS), YOU ACKNOWLEDGE

☐ I have read and accept the terms of use

Sign Up

Firstly, Enter a valid e-mail address.

Secondly, Choose a username of your liking.

Thirdly, Choose a safe and rememberable password.

Then, after carefully reading the Terms of Use, tick the "I have read and accept the terms of use" box, if you wish to continue.

You will notice the **"Sign Up"** button became available. Press it and we are done!

Congratulations, you are now a registered **SYNAISTHISI** user!

2. Login

After you register to **SYNAISTHISI**, you can log in anytime you want, using your registered credentials.

The **Login** button is also situated at the top right corner of our [home](#) page, next to the **Register** button.

3. User Settings

*Having Logged in to **SYNAISTHISI** you'll notice things have changed a bit.*

To start with, where you once had *"Register"* and *"Login"*, you now see your *username* and *"Manage"*. We are going to leave the *"Manage"* option

for the time being and focus on your *username* option.

So, by clicking on your *username*, you immediately notice a pop-up window with two options in it.

- **Profile**
- **Logout**

Logout is pretty self-explanatory. (Be careful that you have finished and saved all your work before doing so.)

Profile gives you access to your user settings menu, where you can change your credentials (password/email) at any given moment. It's important that you don't forget to **Save** the changes you have made before leaving the menu!

Using the Platform

Let's get to the point then!

As mentioned, regarding the changes since you logged in, notice two more options that weren't there before.

- **Services**
- **Topics**

These two terms refer to the platform's main notions

Given that, it's easy to understand that the respective options are the ones we are going to interact with, the most.

1. Topics

*Before getting into specifics about services, we need a way to categorize and organize them, as well as give them a way to communicate messages between themselves and to clients. Thus **"Topics"** came into existence!*

[2]. "In a nutshell, all services communicate by *publishing* and/or *subscribing* messages within **"topics"**, a process managed by a message broker. Particularly, all measurements, decisions and commands are encapsulated into messages and communicated via these *topics*. Once a message is published on a *topic*, the message broker informs and delivers it to all clients that are subscribed to that *topic*."

To illustrate, in the **"Topics"** menu...

Successfully retrieved all topics

Name

Description

Add

Clear

Search in topics...

configuration_input

Receives a configuration command based on the CommandType v2 protocol

celsius_output

Posts a temperature measurement in celsius degrees

fahrenheit_output

Posts a temperature measurement in fahrenheit degrees

configuration_output

Posts a reply to the configuration command received based on the CommandType v2 protocol

Select a Topic to view details and permissions

...you can find a list of all the available *topics*. Click on any of them to get all the relevant information like:

1. its **Name/UID**
2. its **Description**

Also, be sure to check the green text beside the list to identify your permissions (*subscribe/publish*) regarding the selected *topic*.

Hint: You can search for a certain *topic* by **Name/UID** or the contents of its **Description**.

If you desire, you can create your own topic! Simply press the **"Add"** button after you assign a precise *name* and *description* to your *topic*.

Tip: It is recommended that *topic* names should start with a " / " (slash).

Hint: If you don't name the *topic* yourself before pressing **"Add"**, it automatically gets a **UID** generated from the platform.

Now that you are acquainted with the concept of **Topics** lets move on to...

2. Services (Everything as a service!)

In order to use our platform efficiently and to your benefit, it's crucial to grasp the way we define services.

[1]. "To be specific, in our design approach, an IoT service is any *object, device, system, human* or *web service* that is able to perform any of the following operations, namely:

- **S-ensing**
- **P-rocessing**
- **A-ctuation"**

The purpose of the **"Services"** menu, is to list all the services that have been made available to you.

Just by clicking on one of the *services* in that list, you can immediately see all the characteristics of a service such as:

1. its **Name**.
2. its **Description**
3. its **Type** (which of the aforementioned operations it performs).
4. its **Location**.
5. Topics that it is connected with, and their type.
 - by pressing **"Connected Topics"** button.
6. Whether or not you are *authorized* to use the service.

Hint: Search for a *service* by **Name** or the contents of its **Description**.

Of course, you can also create a service of your own through the **"New Service"** subpage.

SaveCancel

Name

Description

ServiceType

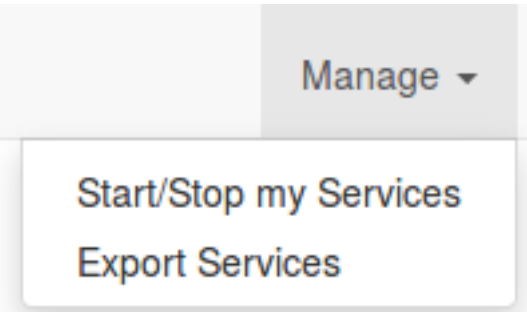
Location

Add Topics ▾

Tip: Be specific and accurate about the characteristics of your new *service* so as to make it more accessible to new/unfamiliar users . You can also connect it with multiple *topics* if they are related.

We have now learned how to access and create services, so here's where the **"Manage"** option we mentioned earlier (see section **"3. User Settings"**), comes into play...

Under **"Manage"** you'll find two options:



- Start/Stop my Services
- Export Services

Start/Stop my Services:

Gives you the ability to upload your services' **code file**, set **run parameters** seamlessly, check which are running at the moment and **Start/Stop** them at will!

Export Services:

As the tittle suggests, lets you **Export** service descriptions locally, to your machine.

With these in mind we conclude the manual. We hope that from now on, you will be able to unlock the full potential of our platform, to use in everyone’s best insterest!

You can now proceed to the next step, connecting a [temper USB temperature sensor](#) to the platform, and start publishing values!

SOURCES

[1]. : "Georgios Pierris, Dimosthenis Kothris, Evaggelos Spyrou, and Costas Spyropoulos. 2015. SYNAISTHISI: an enabling platform for the current internet of things ecosystem. In Proceedings of the 19th Panhellenic Conference on Informatics (PCI '15), Karanikolas Nikitas N., Akoumianakis Demosthenes, Nikolaidou Mara, Vergados Dimitris, and Xenos Michalis (Eds.). ACM, New York, NY, USA, 438-444. DOI: <http://dx.doi.org/10.1145/2801948.2802019> "

[2]. : C. Akasiadis, G. Tzortzis, E. Spyrou and C. Spyropoulos, "Developing complex services in an IoT ecosystem," 2015 IEEE 2nd World Forum on Internet of Things (WF-IoT), Milan, 2015, pp. 52-56. doi: 10.1109/WF-IoT.2015.[7389026](#) URL: <http://ieeexplore.ieee.org/stamp/stamp.jsp?tp=&arnumber=7389026&isnumber=7389012>