

Data Enricher

Overview

Restructure data formats and models on the fly by using a drag and drop interface with no need for an extra ETL tool in your IoT project. Security and ACL are implemented by default while saving 2G, 3G and 4G bandwidth with a marketplace of full standard data models. Loop Data Enricher is integral to aggregating and normalizing data coming from many disparate systems.

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DataEnricher End-to-End Demo

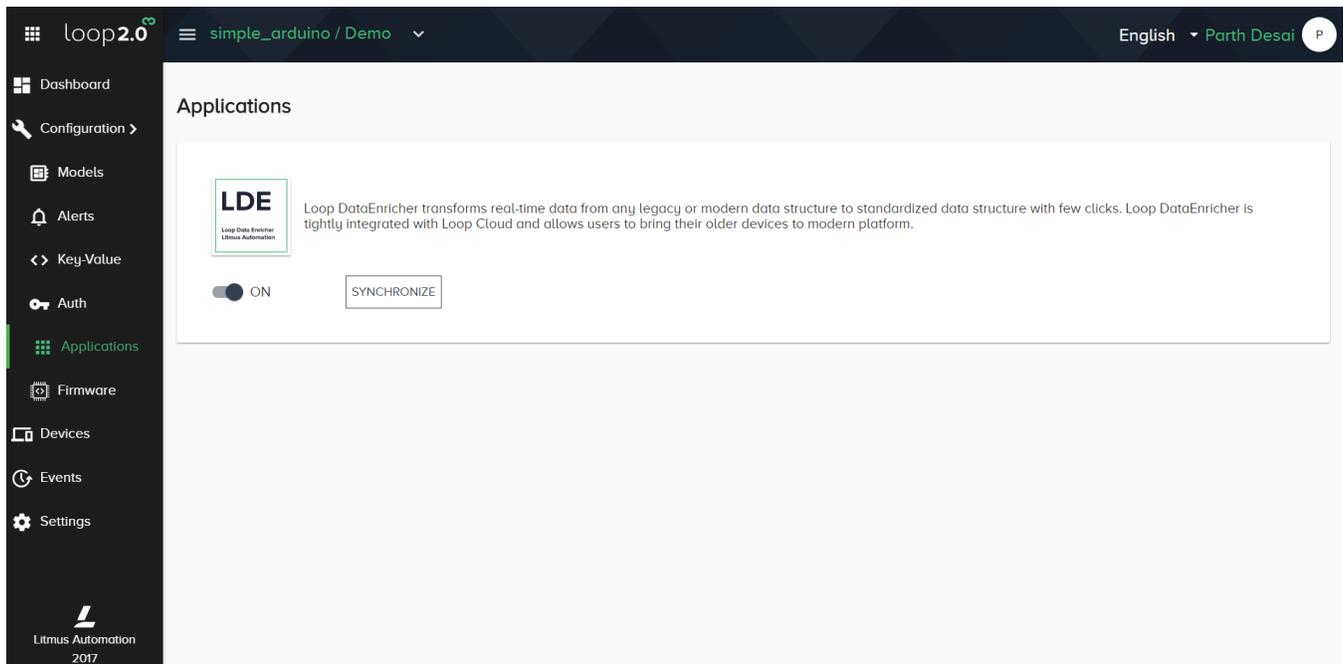


For full-screen viewing, click the title of the video ([DataEnricher: End to End Demo](#)) below.

Getting Started

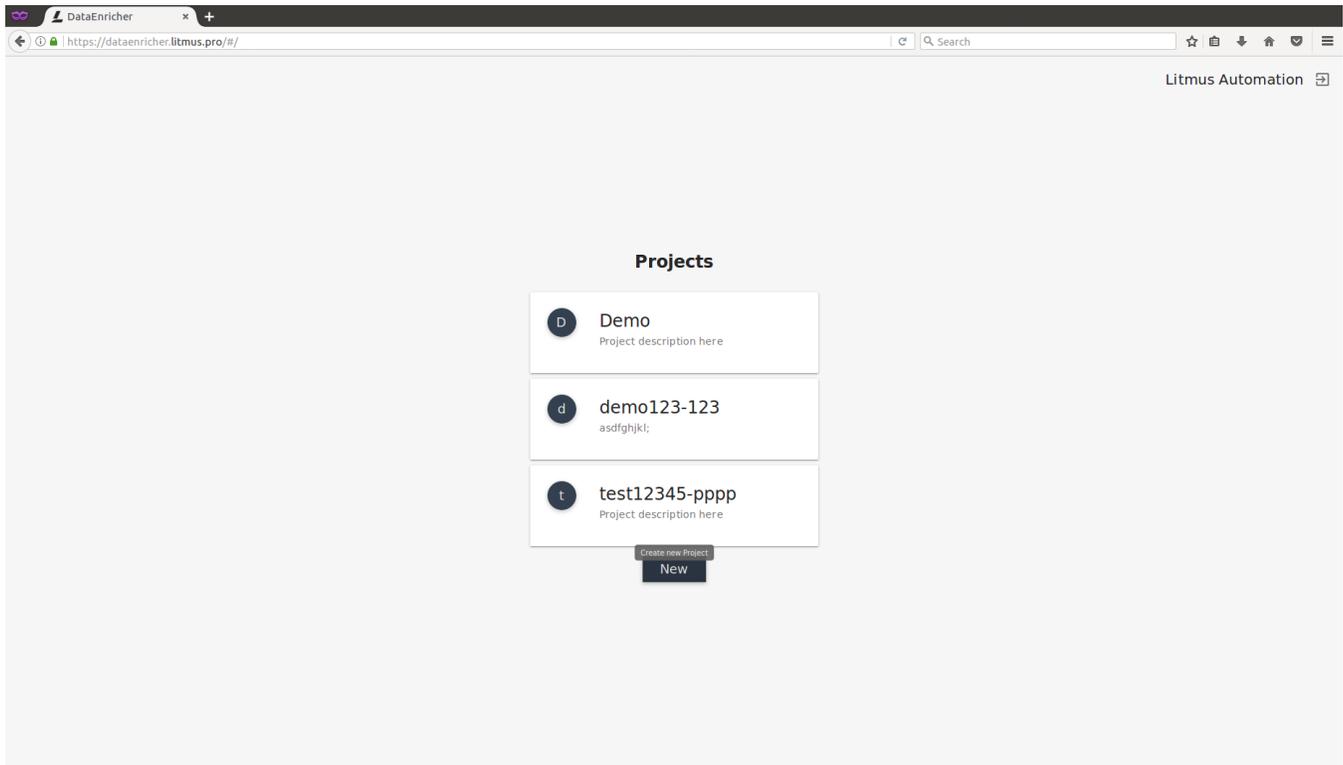
Step 1: Navigate to DataEnricher

DataEnricher can be synchronized from litmus.pro by navigating to Applications, and then clicking the synchronize button as shown:

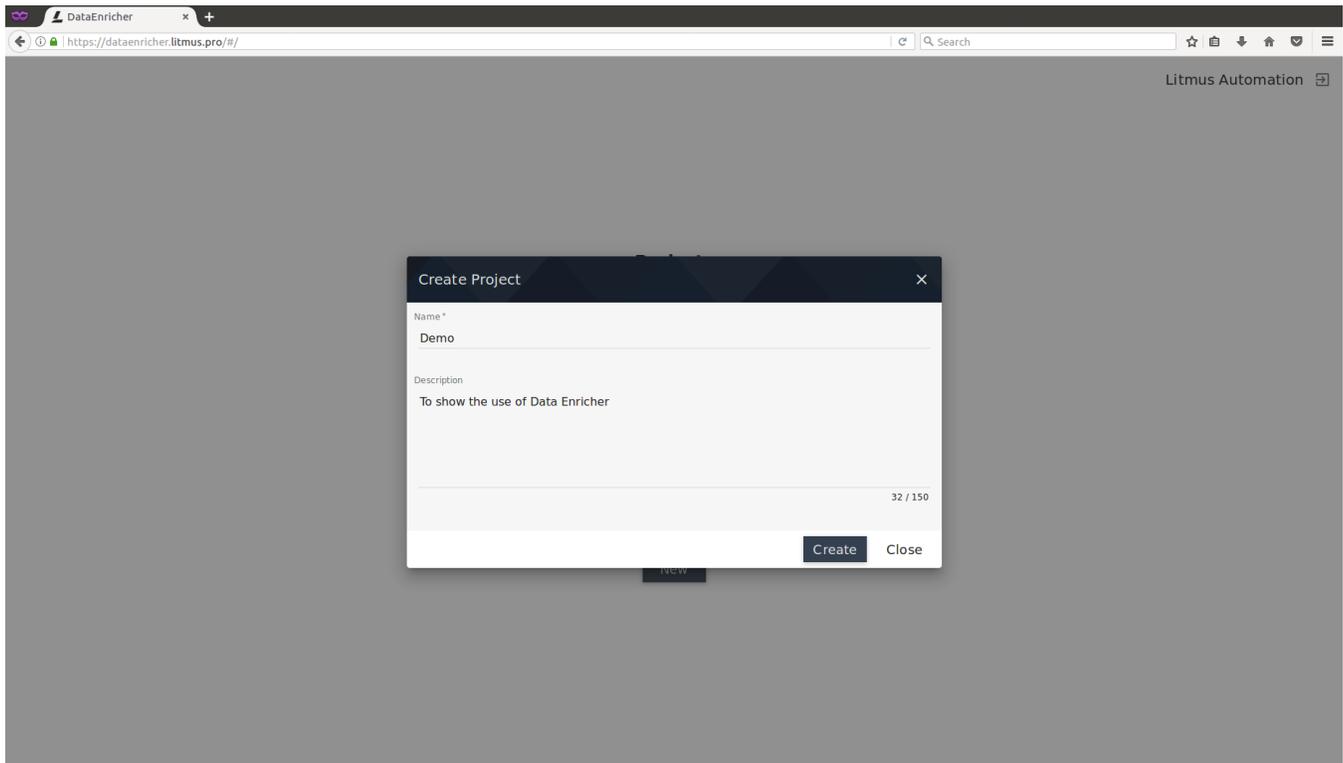


Step 2: Projects

DataEnricher shows the list of projects as soon as you log into it. The list is the same to the list of projects you see under your company.



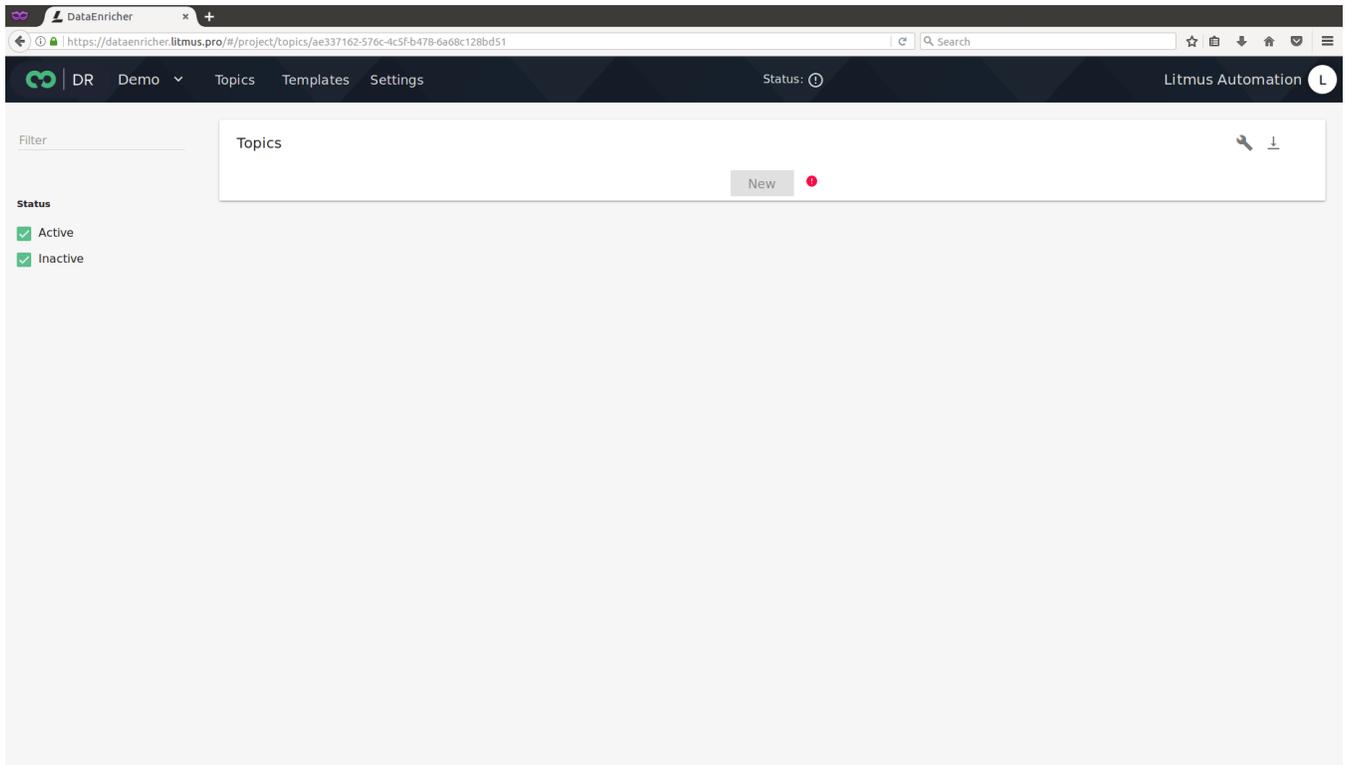
A new project can be created manually by clicking the *NEW* tab, and providing the necessary details:



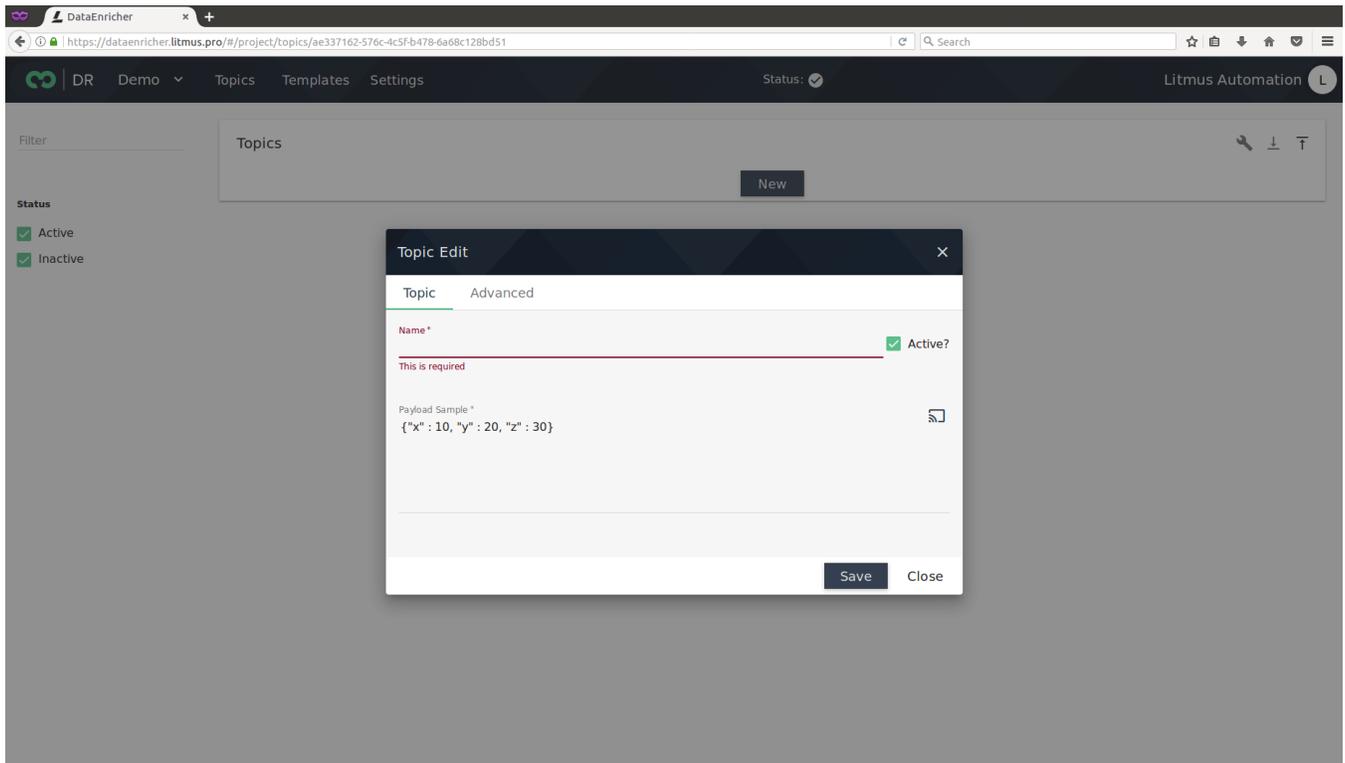
Once saved you can see the list of projects on the first page. Click on the particular project you want to access.

Step 3: Dashboard

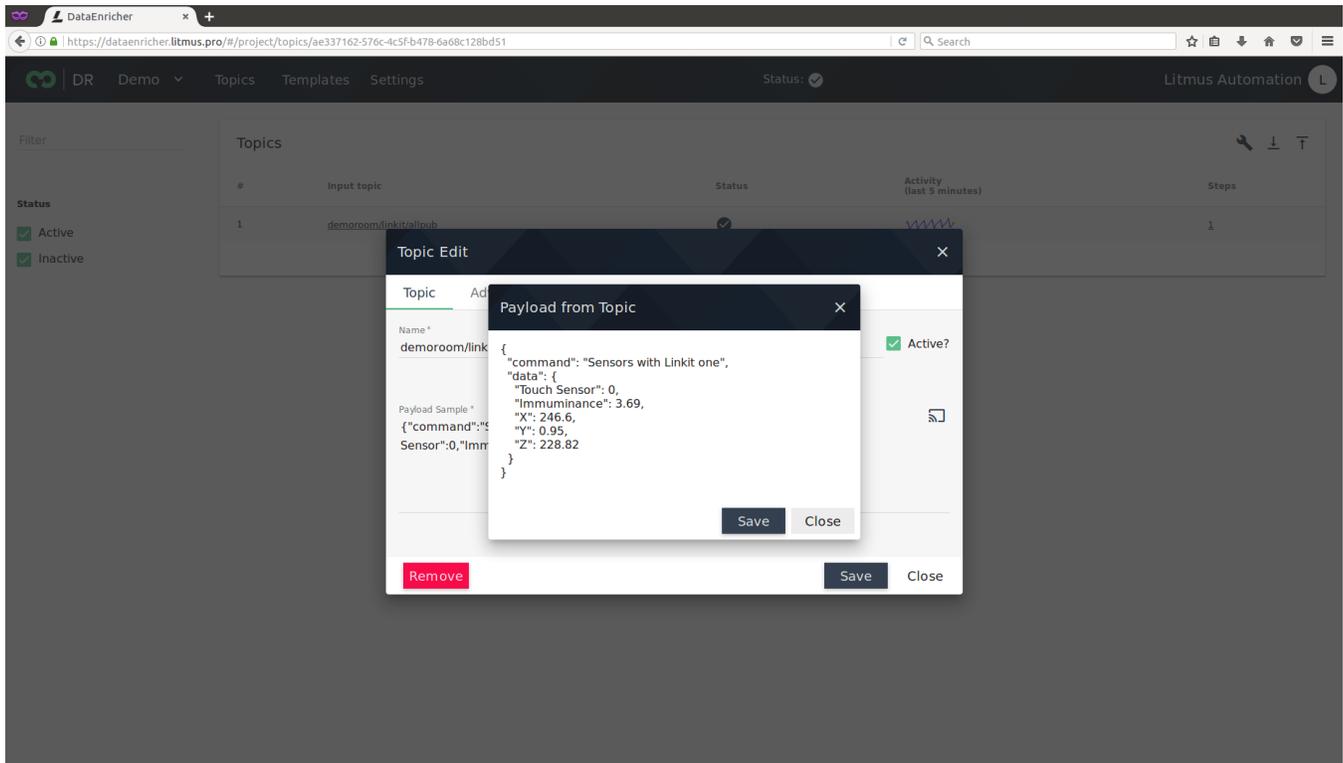
Once you enter a particular project, you can see the complete dashboard of DataEnricher. It contains the list of topics which needs to be entered by the user.



Click on *NEW* to enter the topic on which data is being currently published.



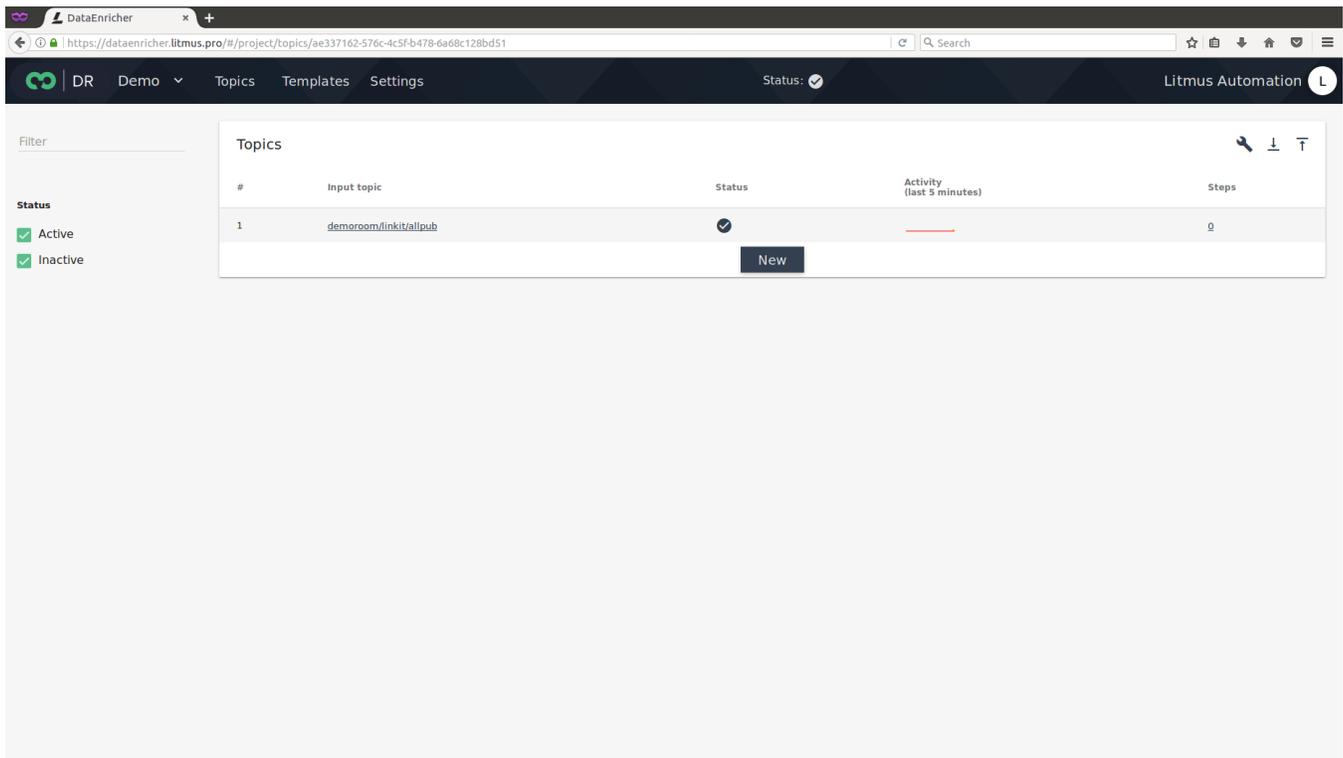
Click on the *Start grabbing input topic* icon to the right and it will fetch the current data being published to the topic entered.



Save the topic once it is defined and live data is fetched.

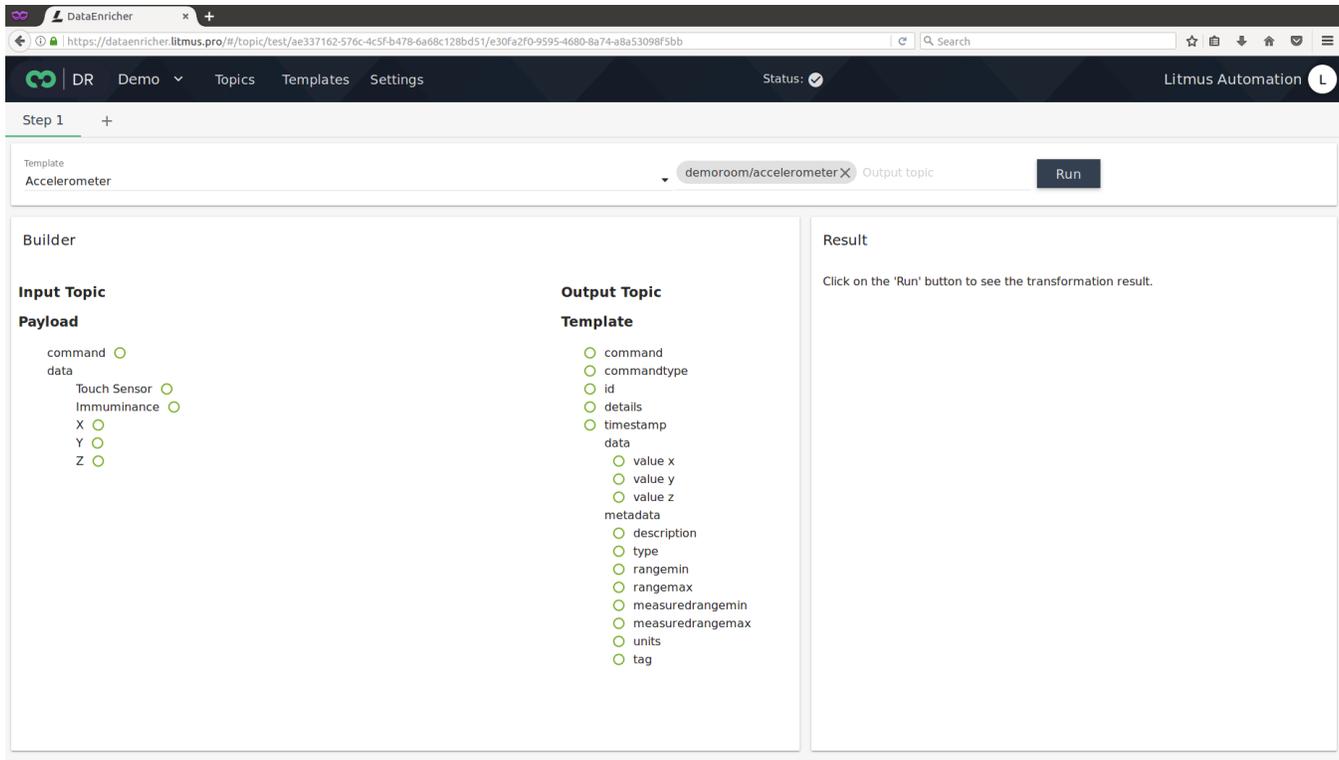
Step 4: Topic Builder

Click on *Start topic builder* icon on the top-right corner of the page, or click on the number of Steps to enter to customize the data on the fly:

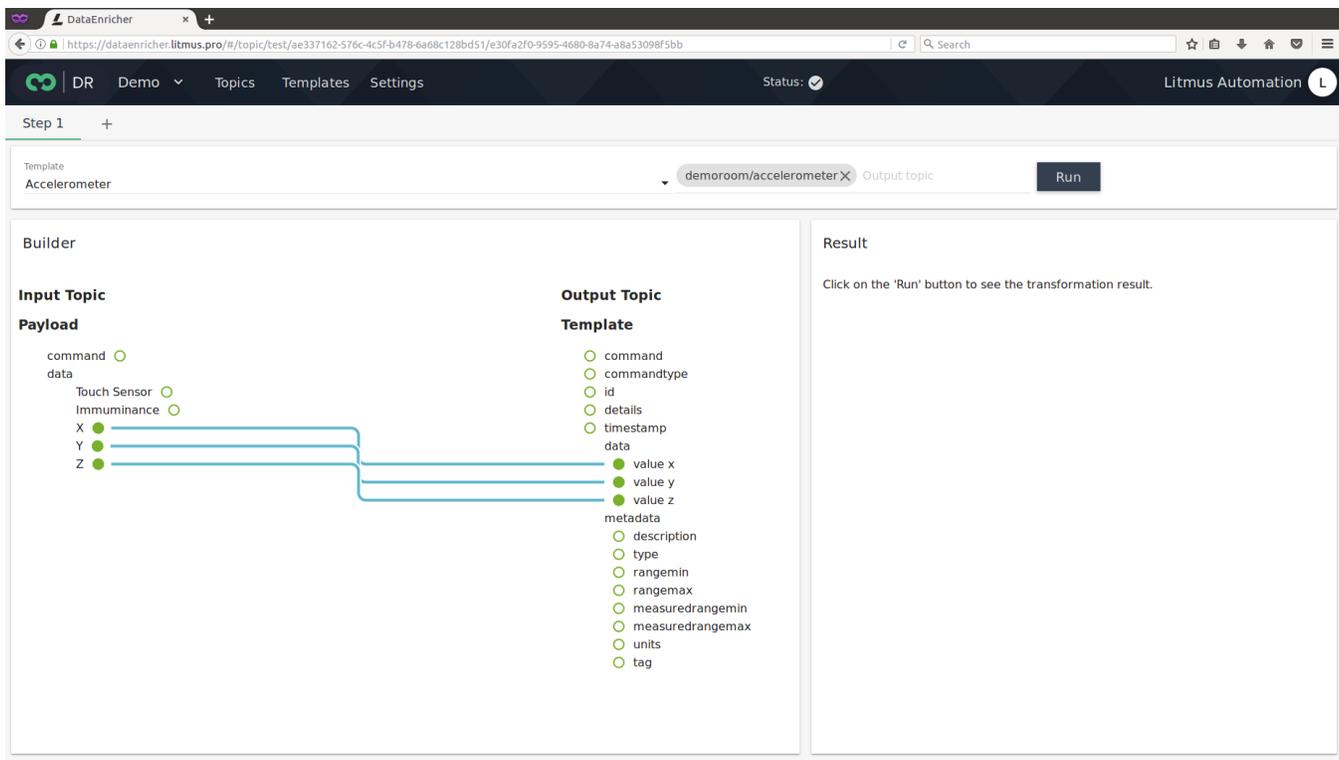


Select the *Template* from the drop down list. Enter the output topic you want the enriched data to be published to.

NOTE The user sees the templates which are present in the My Templates tab, in the dropdown list.



You will see the current payload on the left and the standard template on the right. Drag the data points from the current payload to match the data points on the standard template on the right.



In the current example shown above, the device is sending accelerometer data on the topic **demoroom/linkit/allpub**. The input payload does not contain the meta data or any other details. We can connect the x,y,z values of the accelerometer to the "value x", "value y", "value z" of the standard template. Once connected click *RUN* and you can see the enriched data on the right tab. The enriched data is being published to the Output topic provided by the user **demoroom/accelerometer**.

Template: Accelerometer | demoroom/accelerometer X | Output topic | Run

Builder

Input Topic
Payload

- command
- data
- Touch Sensor
- Immuminance
- X
- Y
- Z

Output Topic
Template

- command
- commandtype
- id
- details
- timestamp
- data
- value x
- value y
- value z
- metadata
- description
- type
- rangemin
- rangemax
- measuredrangemin
- measuredrangemax
- units
- tag

Output Topic
demoroom/accelerometer

Payload

```
{
  "command": "Accelerometer",
  "commandtype": "read",
  "id": "3306",
  "details": "This IPSO object can be used to represent a 1-3 axis accelerometer",
  "timestamp": "ISO8601",
  "data": {
    "value x": "246.6",
    "value y": "0.96",
    "value z": "228.8"
  },
  "metadata": {
    "description": "It is used to measure the acceleration in all 3 axis",
    "type": "float",
    "rangemin": "0",
    "rangemax": "20",
    "measuredrangemin": "0",
    "measuredrangemax": "15",
    "units": "g",
    "tag": ""
  }
}
```

Settings

The *Settings* tab contains the project details which are synchronized automatically from litmus.pro

General

The general tab consists of the project name and the project description. It can be edited if needed, as well as a description of up to 150 words can be added.

Project settings

General | Broker | Users | Delete

General settings

Name*
Demo

Description
To Show the use of Data Enricher

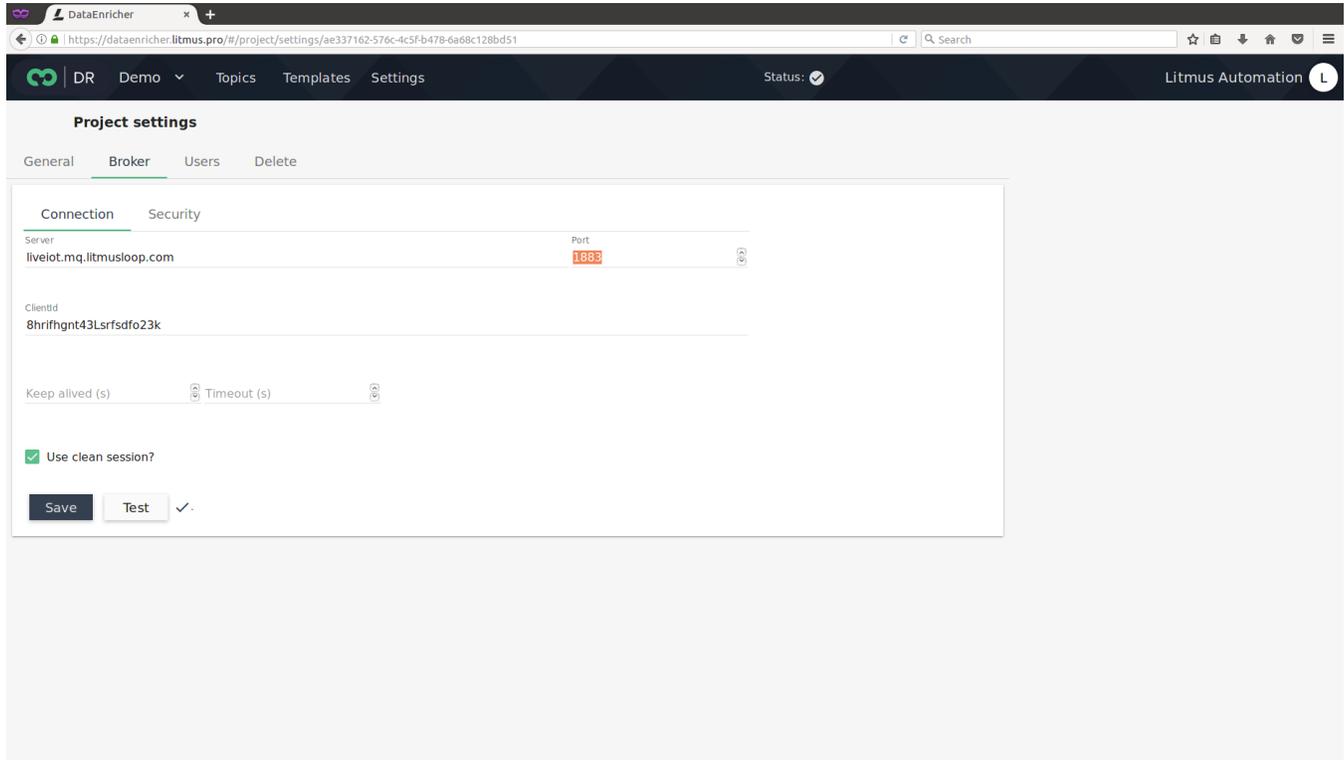
32 / 150

Save

Broker

Broker consists of two tabs **Connection** and **Security**.

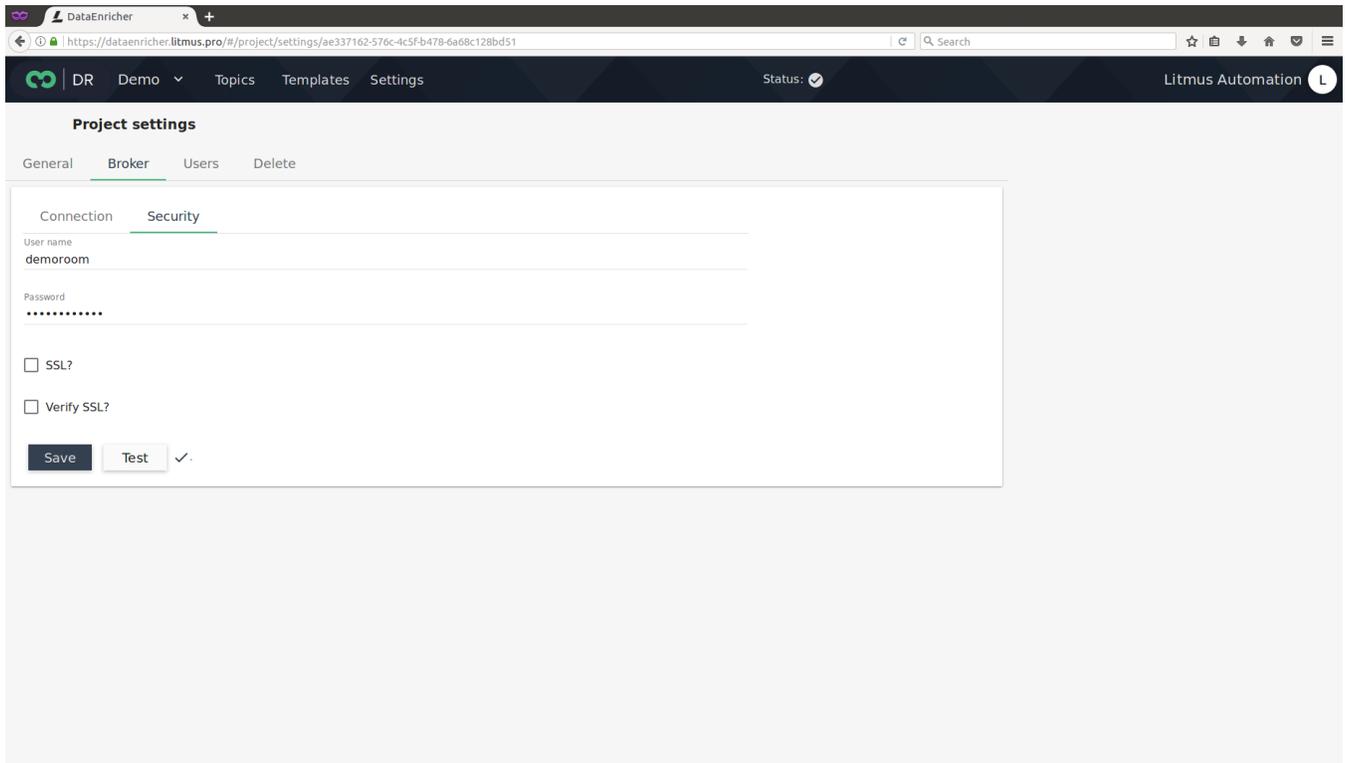
Connection consists of the server details that is the Server, Port, Client ID. The parameters are synchronized automatically and user only needs to enter it manually if they create a standalone project inside Data Enricher.



The screenshot shows the 'Project settings' page in the Data Enricher application. The 'Broker' tab is selected, and the 'Connection' sub-tab is active. The form contains the following fields and controls:

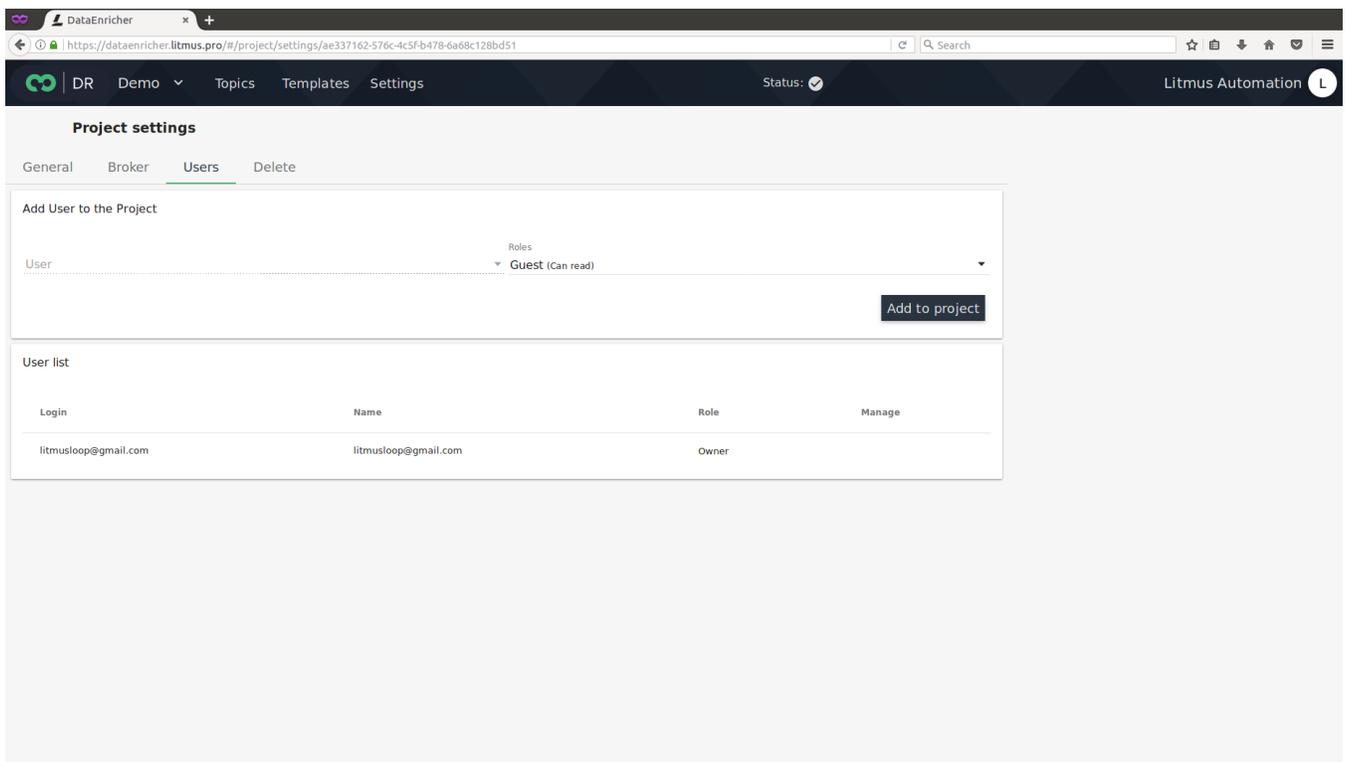
- Server:** liveiot.mq.litmusloop.com
- Port:** 1883
- ClientId:** 8hrifhgnt43Lsrfsdfo23k
- Keep alive (s):** [input field]
- Timeout (s):** [input field]
- Use clean session?:**
- Buttons:** Save, Test, and a checkmark icon.

Security consists of a username and password for the connection. The user is required to enter this manually if they create a standalone project inside Data Enricher. The SSL, if used, can also be enabled and verified under the security tab. It will synchronize automatically.



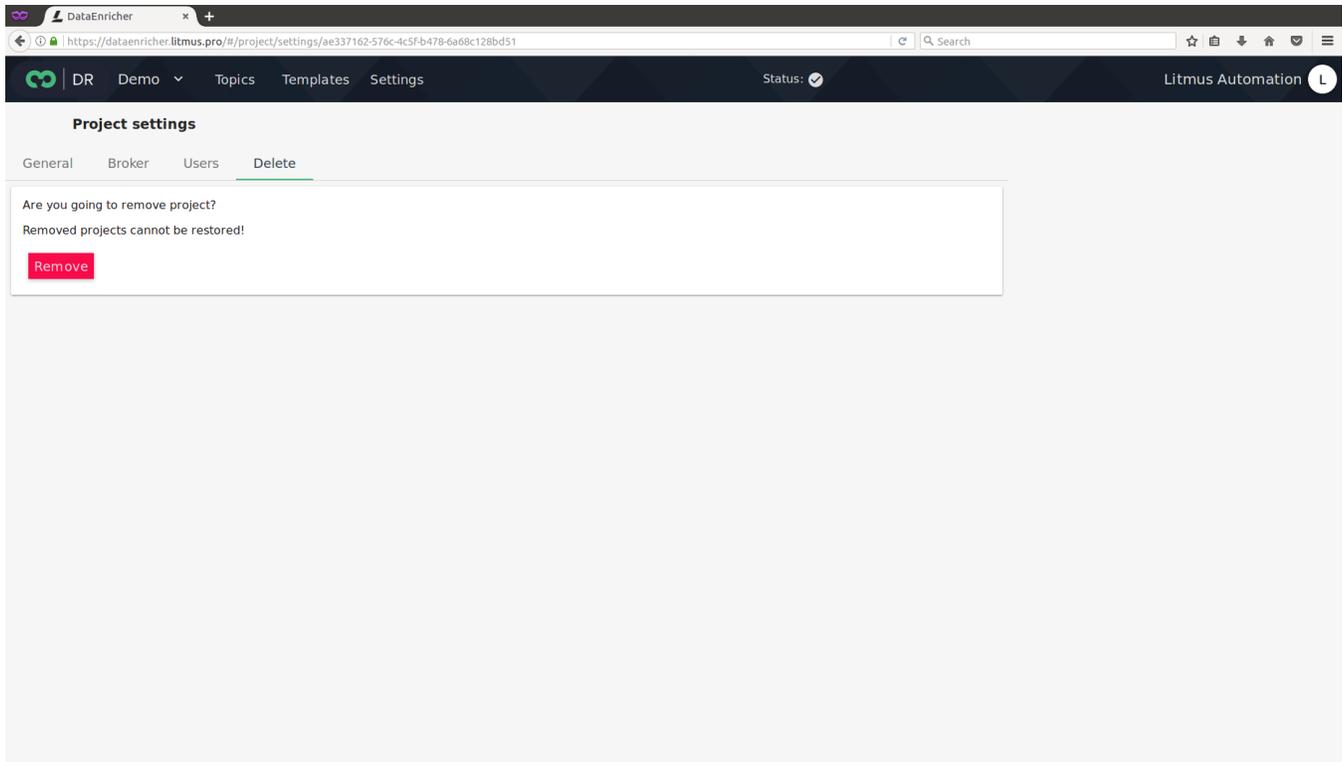
User

Users can be added to the Data Enricher project from this tab. If there are existing users on the project one can define their role as follows: **Guest:** Can read only. **Master:** Can modify project attributes and topics. **Owner:** Can delete a project and assign project members.



Delete

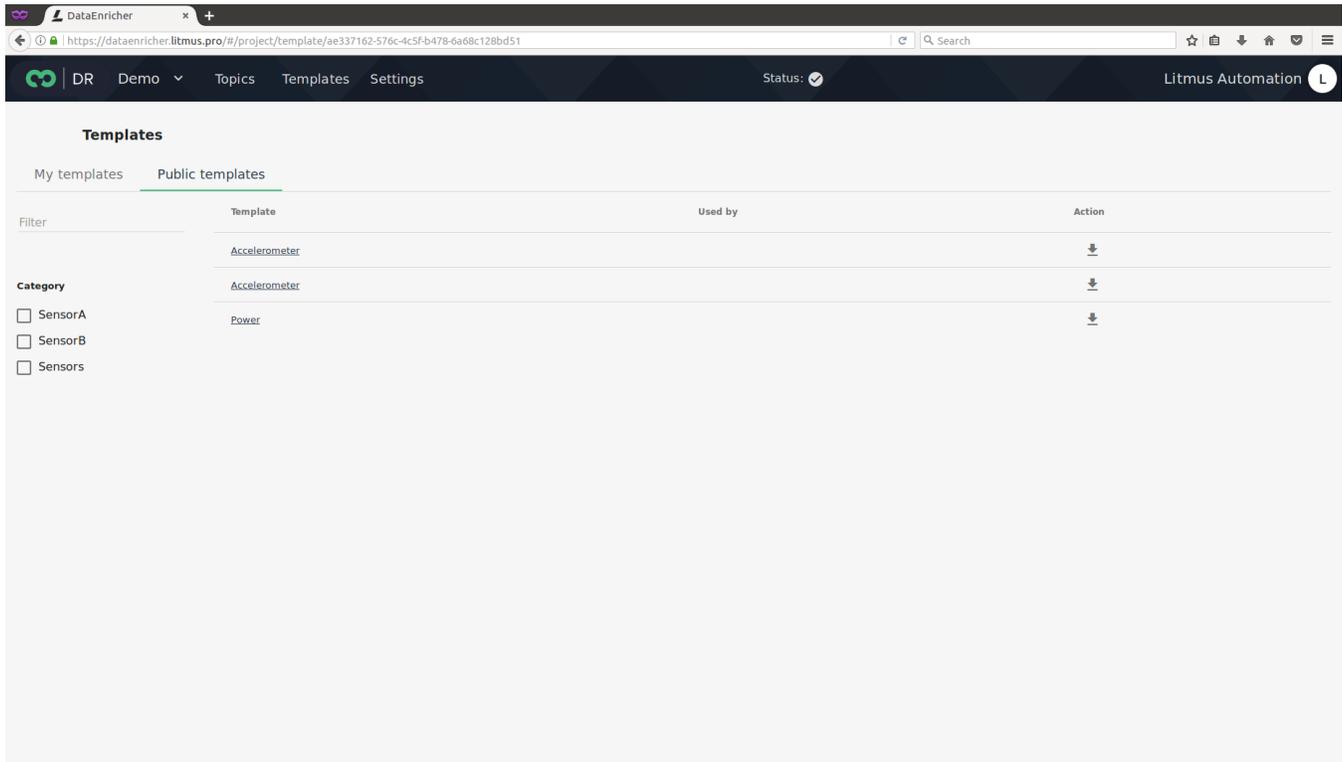
Projects can be deleted under Settings > Delete Section.



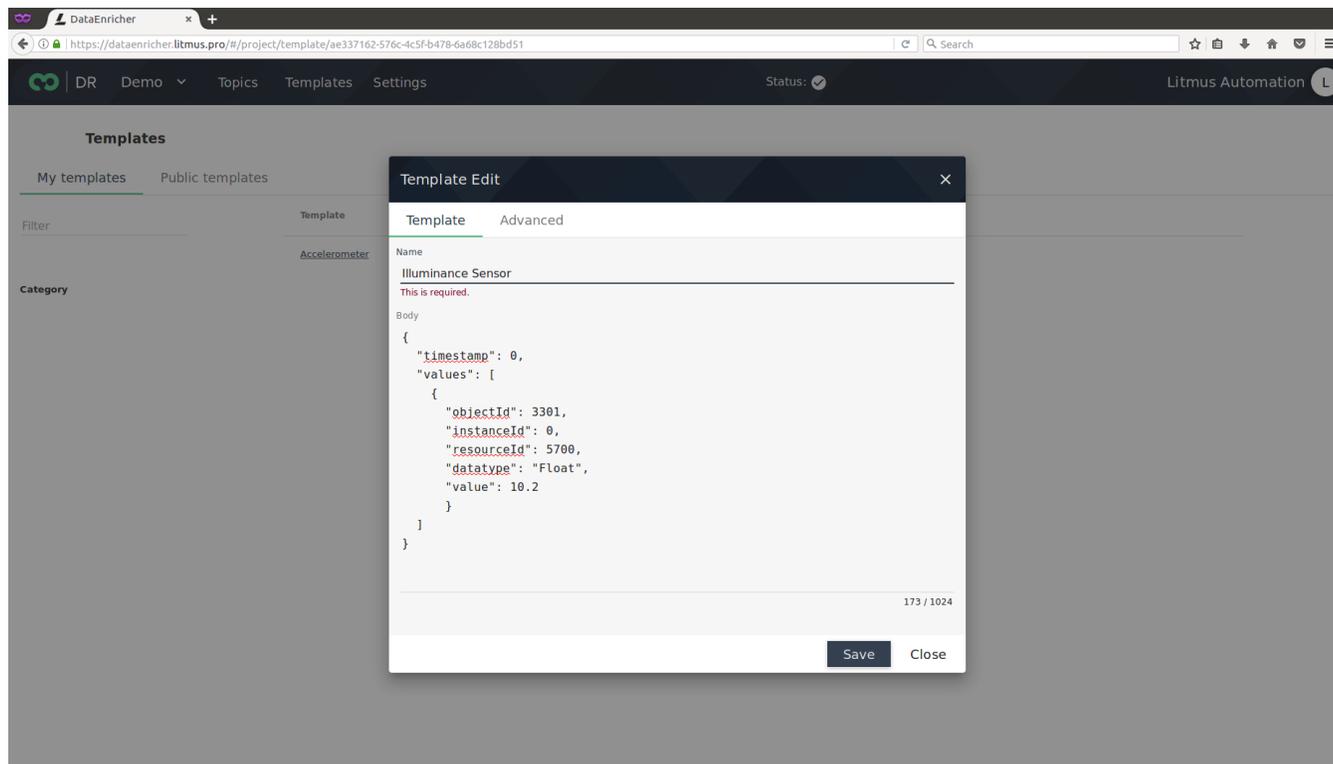
Templates

Templates consists of two sections: My Templates and Public Templates.

The **Public Templates** consists of standard templates as per OMA standards. Click on the button under Action to copy it to My Templates.



The **My Templates** consists of the templates which are downloaded from Public templates and also the templates designed by the user. User can create their own template by clicking the **NEW** tab and adding the details.



The Advanced tab in the Template Edit tab can be used to define the tags of the device. Once added click save to see the templates in My templates.

