



AN INFLUXDATA CASE STUDY

How eSoftLink IoT Platform Uses InfluxDB Enterprise for Real Time Energy Management

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OCTOBER 2019 (REVISION 1)

Company in brief

eSoftThings is a solution-focused tech company founded in 2014, based in Rennes in France and serving Europe, North America and Asia markets. eSoftThings has extensive experience in telecom and semiconductors industries. It has a team of 50 hardware and software engineers with expertise in developing embedded, mobile, application, and backend software.

eSoftLink develops and designs products and solutions to meet the challenging requirements and high-quality standards of the Smart Device and Autonomous Vehicle sectors. For each of these two sectors, eSoftThings has a business unit to cater to the sector's needs. The Autonomous Vehicles unit ensures that pedestrian detection and driver monitoring algorithms are well-integrated into the car and performing with high efficiency. The Smart Devices unit has two main activities: acoustics (that handles performance and software integration) and Internet of Things (focused on eSoftThings' IoT platform, eSoftLink).

Case overview

eSoftThings needed to use its [IoT platform eSoftLink](#) to transform a smart meter into a real-time feedback tool for consumers and allow them to achieve energy savings through energy consumption insights. eSoftThings is able to collect a large volume of time series data with its implementation of InfluxDB Enterprise (and its metrics collection agent Telegraf) that provides value-added services while maintaining GDPR compliance.

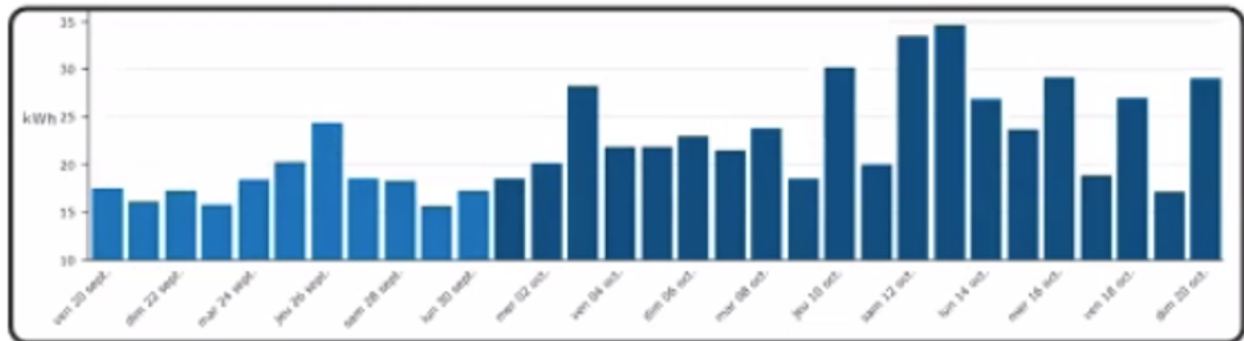
Deploying InfluxDB Enterprise and Telegraf, eSoftLink platform provides real-time energy management. This IoT solution is end-to-end from hardware device to backend platform to mobile application. eSoftThings uses InfluxDB Enterprise to store the time series data that their energy application collects from sensors. They use this data to help monitor, alert and predict in real-time.

"The more real-time the feedback tool, the highest the energy savings percentage at the end of the day by the consumer."

Samuel Chevrier, Technical Marketing Engineer, eSoftThings

The business problem

Smart metering is one of the first steps to address challenges surrounding energy consumption. By providing real-time data on electricity and gas usage, smart meters allow consumers to make smarter decisions about their energy usage.

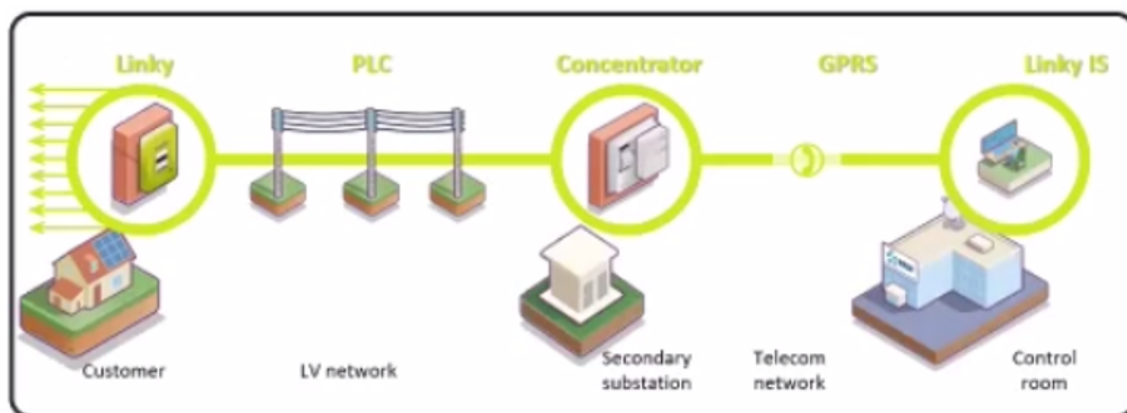


Achieving energy savings has become a major goal for both utility companies and consumers. In 2012, under the Energy Efficiency Directive 2012/27/EU, the EU set a 20% energy savings target by 2020. Yet to save energy, you first have to assess consumption and compare it to production.

For example, in France, the Linky program was implemented (Linky is the green smart meter in the image below):

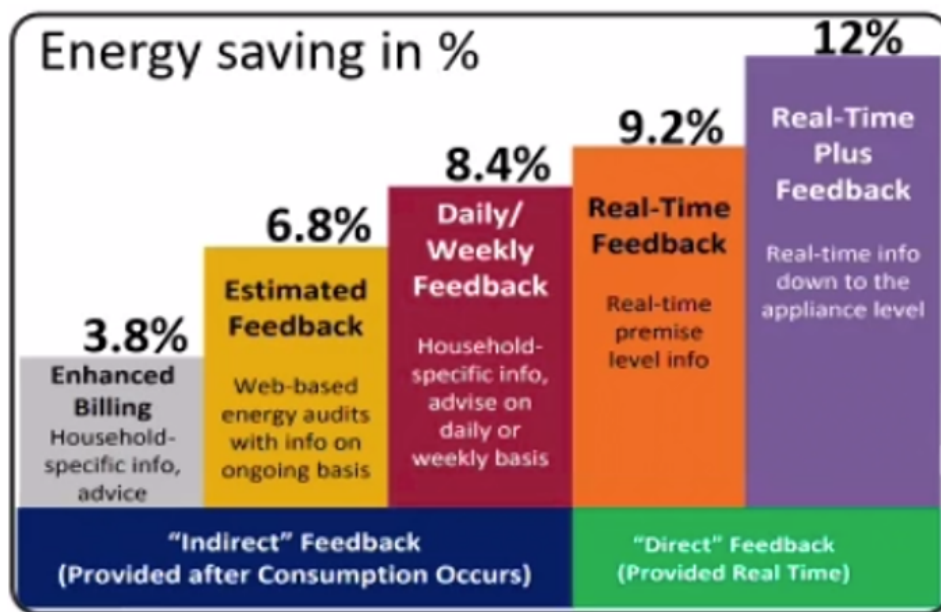
- Linky (smart meter) is connected through Power Line Communication (PLC) to a concentrator:
- The smart meter uploads its consumption information only once a day (due to a small PLC tunnel and limited data rate) with 30-minute granularity.
- The concentrator uploads the data it collects from the meters, in GPRS, to the information system.

Smart meter system - French example with Linky



The utility company offers a customer web portal to track customers' energy consumption on a yearly, monthly, and daily basis. While this enables customers to make high-level comparisons (such as comparing summer and winter energy consumption), it doesn't allow them to identify the devices that most contribute to overall consumption. Decreasing power consumption requires the ability to check consumption per device in real-time.

Real-time tracking per device improves energy savings. Major studies – conducted by [National Science Research Institutes](#), [Oxford University](#), and the [American Council for an Energy-Efficient Economy](#) – have similarly demonstrated that consumer access to real-time consumption feedback improves energy savings.

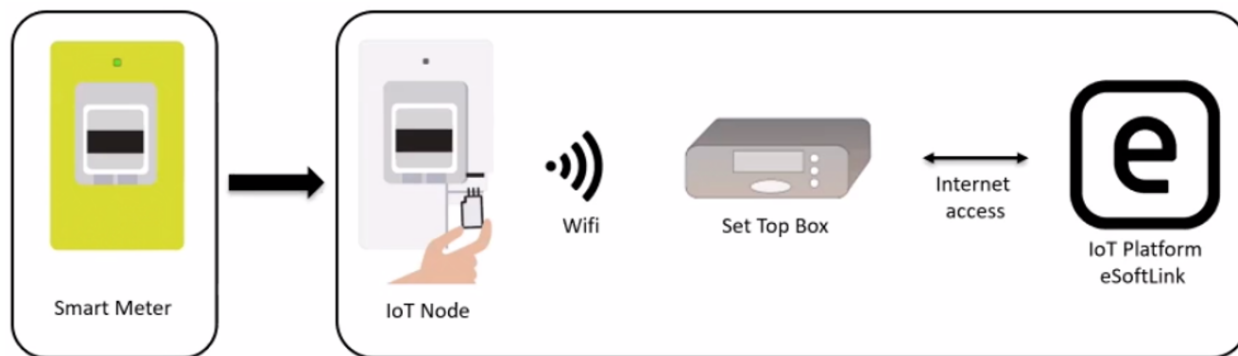


The importance of a real-time feedback tool

As shown above, having only Enhanced Billing results in a 3.8% energy savings. In contrast, the availability of an in-depth view down to the appliance level, plus a real-time feedback tool, increases energy savings to 12-23%. Putting in place such a tool is essential to understand and manage one's own energy consumption. Better control of energy use results in cost savings for households. This challenge is what drove eSoftThings to transform the smart meter into an IoT system using their eSoftLink IoT platform.

The technical problem

eSoftThings set out to transform the existing smart metering system into a real-time tool, for their lead customer Total Direct Énergie, based on the following design:



Transforming a smart meter in an IoT node through WiFi connectivity

- The Smart Meter has an interface slot.
- The slot is used to connect an IoT module, which eSoftThings designed to plug into this interface.
- The IoT module connects, via Wi-Fi, to the domestic set top box and sends data to eSoftLink.
- Energy consumption data is generated by the meter every second and sent over the IoT link to the backend platform. They used the measurement capability of the smart meter since it's already certified and well-designed. The smart meter data is sent to eSoftLink every second so that consumers can easily view and monitor their energy consumption.
- The entire hardware-software chain (IoT Node + IoT platform) has been designed and implemented by eSoftThings.

In building this solution, eSoftThings realized that they needed a time series database for eSoftLink to store and process the large volume of time-stamped data generated by the smart meters.

The solution

"We wanted a solution that can support this data volume, which led us to deploying a time series database."

Samuel Chevrier, Technical Marketing Engineer, eSoftThings

Why InfluxDB Enterprise?

eSoftThings chose InfluxDB time series platform because they needed a solution that is:

- **Performant with high write speed** – they collect data 24/7, at a 1-second rate with tens of thousands of devices.
- **Scalable** – the enterprise edition of InfluxDB (InfluxDB Enterprise) was a must.

- **Popular** - InfluxDB at the time had 17,000 stars on GitHub, and they believed popularity would guarantee easy-to-find documentation, community guidance and long-term support.

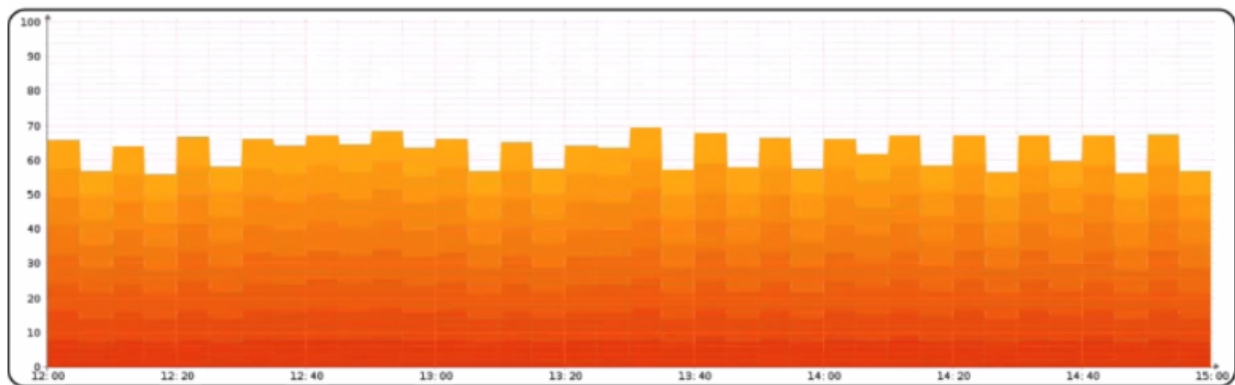
To ensure that InfluxDB and Telegraf fit well into the system, eSoftThings performed load tests that recorded server activity given the following:

- 48,000 users
- 1 data / second / user
- 2 tags per data to write in the databases.

In these load tests, they recorded Telegraf and InfluxDB KPI's.

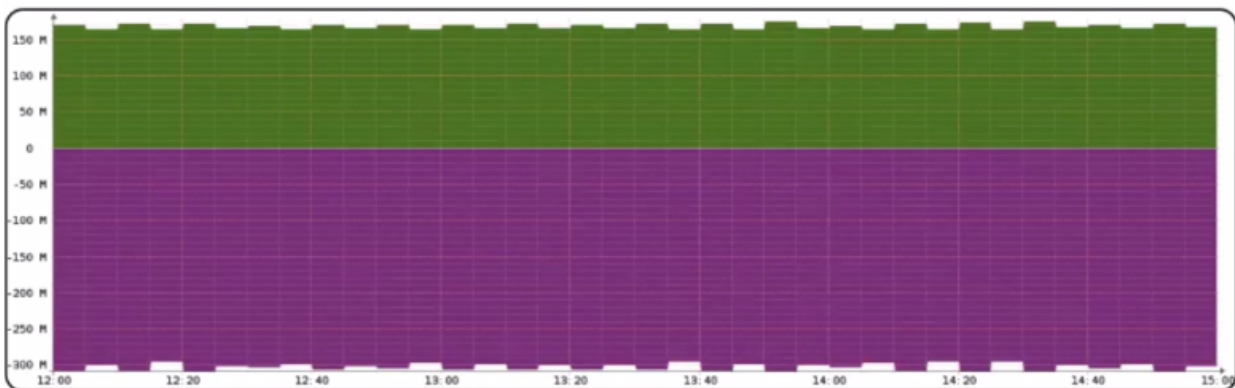
For each Telegraf load test, they had six instances of Telegraf in total (3 per server).

Load Test - Telegraf - CPU



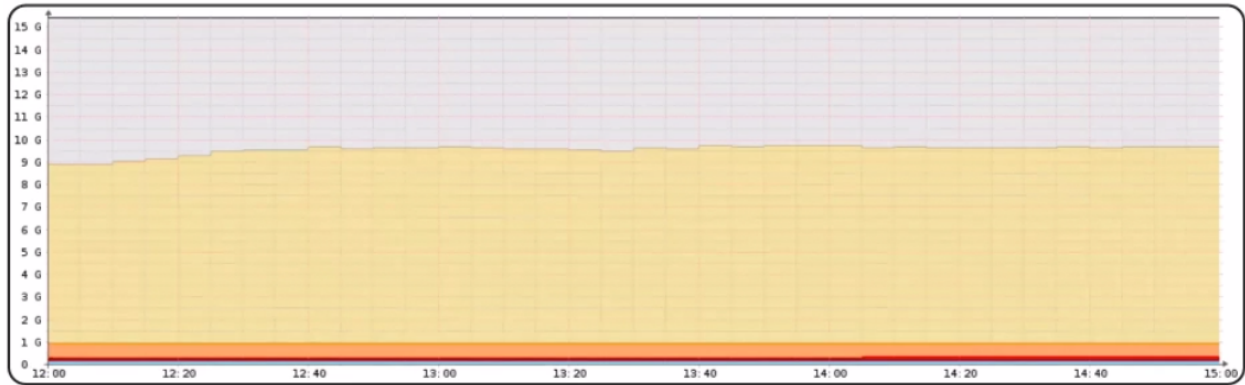
Mean 63% CPU usage/server (consistent activity throughout the test period)

Load Test - Telegraf - Traffic



Mean of 460 Mb/s overall traffic (in and out messages, aggregated)

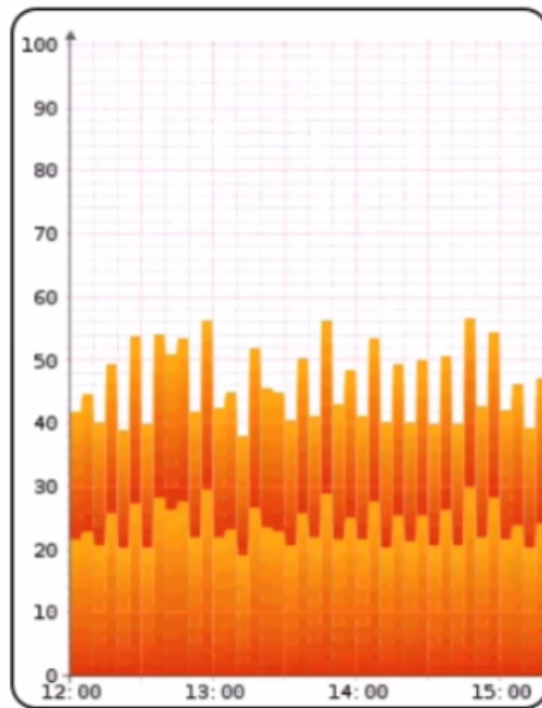
Load Test - Telegraf - Memory



Memory consumed by Telegraf: 63% of the server RAM, 4% of the cache, 0% swap

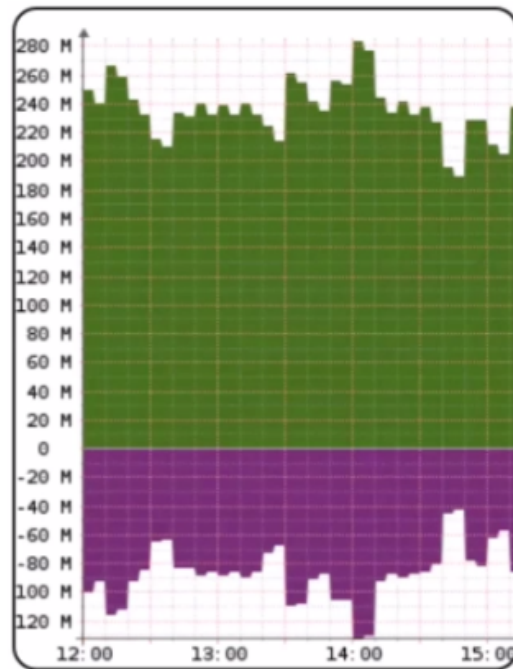
They also tested InfluxDB performance, using (for each test) 2 instances of InfluxDB on 2 servers.

Load Test - InfluxDB - CPU



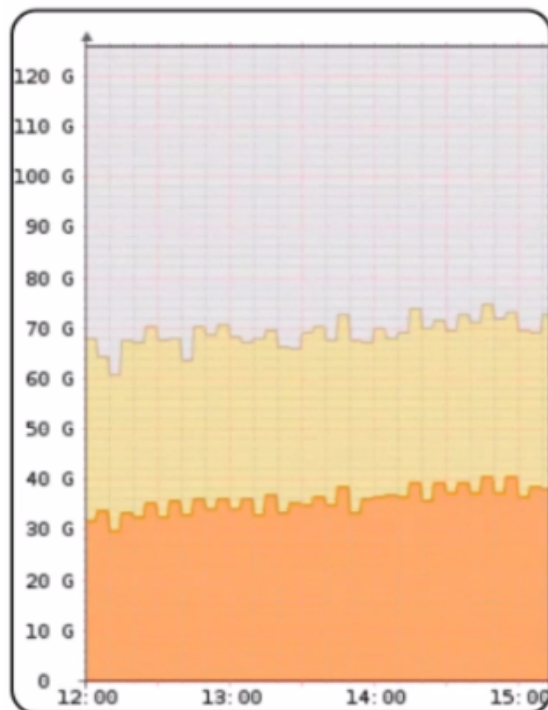
The mean for InfluxDB was 43% of CPU used.

Load Test - InfluxDB - Traffic



There was 360 Mb/s of traffic on both servers.

Load Test - InfluxDB - Memory

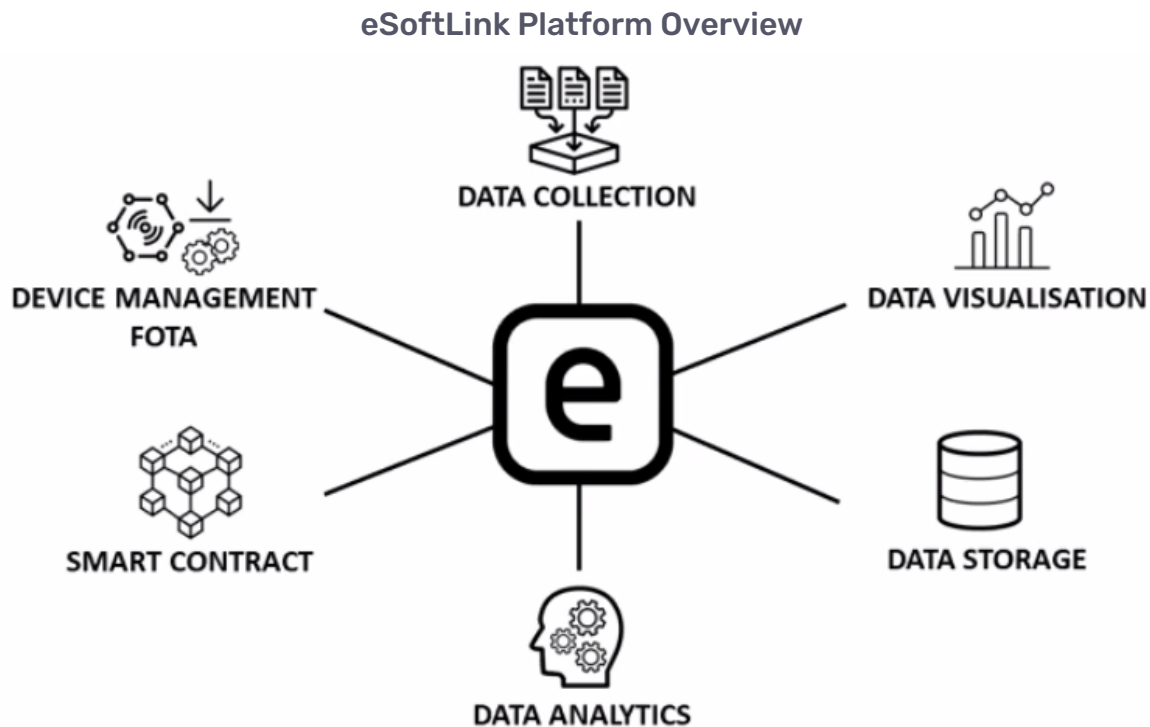


Memory usage was 58% RAMs, 33% cache and 0% swap space.

The load tests confirmed that InfluxDB and Telegraf were the right time series platform solution to use for eSoftLink and that they had put in place the right configuration.

eSoftLink's main purpose is to collect the data coming from all the IoT nodes connected to the smart meter and to present this data through data visualization for:

- Customers on their smartphones to monitor their energy consumption
- The utility company to manage the fleet of devices connected to the platform



Platform functions are as follows:

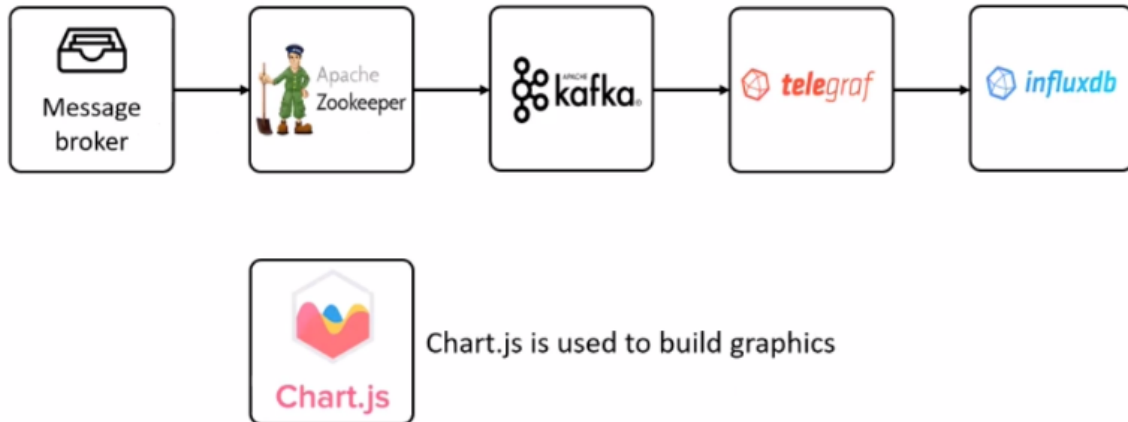
- **Data storage** through InfluxDB
- **Data analytics** to calculate consumption and spending
- **Smart Contract** (which eSoftThings created through blockchain), an application where people can view and select offers available from producers who want to sell their energy directly to consumers connected in the same urban zone.
- **Device management**, showing which device is connecting, active or inactive, what firmware is running on each device, if the Wi-Fi connection and Wi-Fi RSSI are good enough, and so on.

eSoftThings built eSoftLink IoT solution using the following technologies:

- **Message broker** built in-house primarily to be able to manage data flow more easily
- **Apache Zookeeper and Apache Kafka** for handling huge data volumes quickly to provision real-time advanced data analytics applications

- **InfluxDB** for time series data and **Telegraf** for metrics collection
- **Chart.js** with PHP for dashboarding

Technologies Used



Technical architecture

"InfluxDB makes it very, very easy to apply this kind of data retention and is very useful for GDPR compliance."

Nicolas Guilbaud, CTO, eSoftThings

The eSoftLink architecture has three main pillars as shown below.

eSoftLink Architecture Overview



- **IoT node:** Can be a sensor or actuator, existing or designed by the customer or eSoftThings.
- **eSoftLink:** Backend platform, with administration panels to manage data securely. The data can be hosted on customer premises or on any Linux server or cloud-based solution.
- **End user frontend:** Mobile / web application, existing or designed by the customer or eSoftThings. The frontend can be developed for iOS and Android.

eSoftLink key features include:

- Scales at volume from 1 message per day to several million messages per minute
- Real-time energy monitoring and alerting by email or mobile application using iOS/Android free notifications
- Flexible to use on the Edge, commercial cloud service, or in the Private Cloud
- Security management (GDPR compliant, TLS, and HTTPS protocol-based), ensuring a secure internet connection between the IoT node and IoT platform
- Integrated AI analytics and secure connection to data lake for predictive and preventive applications (such as analysis and classification of usage trends)
- Device management (remote logs, firmware update, remote debug with auto-diagnostics) that can be done by the IoT node itself and pushed to eSoftLink
- Administration console with customizable panels and interfaces

Database design to ensure GDPR compliance

eSoftThings has to comply with the General Data Protection Regulation 2016/679 (GDPR), a regulation in EU law on data protection and privacy for all individual citizens of the European Union and the European Economic Area. To ensure compliance, eSoftThings implemented features that had an impact on the architecture and the design within the database:

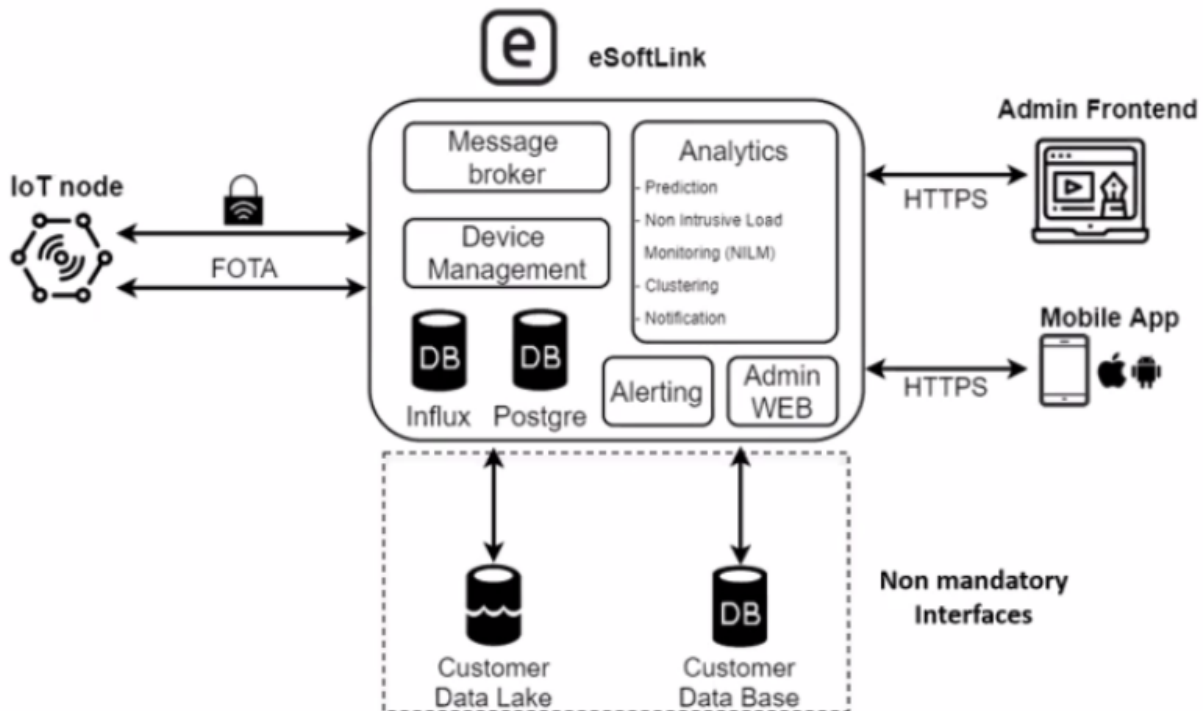
- **Right to be forgotten:** you must be able to delete database data that's linked to a person (in the active database and in the backup).
- **Right to consult:** individuals can download all data related to their respective accounts.
- **Data portability:** extract all data related to a person's account, in CSV format, to transfer to a different provider.
- **Data log access:** manage and regulate data access, and monitor each access to any attribute of the database and log user details.
- **Anonymization:** personal data stored in the database should be anonymized so that you cannot link the data with the ID or with a given profile.

While ensuring GDPR compliance, eSoftThings had to collect a lot of personal information to provide powerful insights to consumers and providers. They applied several database retention policies given the huge amount of data, taking advantage of InfluxDB's flexible built-in retention policy functionality:

- The first retention policy is set to daily (they do daily 10-minute averages).

- Then, after one month, they apply some retention as well.
- Because of GDPR policy, they can't keep personal data for a prolonged period, so after one year, they remove all the data and apply another retention policy to anonymize the data. They group together several customers and apply calculations (such as mean and square mean) to retain some information in anonymized form.

The Blocks Within eSoftLink Architecture



- **IoT node with two data transfer modes:** one dedicated to firmware over the air (FOTA) and the other secured to the platform.
- **Message broker:** built by eSoftThings, receives all the messages coming from all the nodes.
- **Device management:** allows firmware upgrades on the devices connected to the platform or checking devices' connection status or firmware version.
- **Two types of databases:** InfluxDB time series database, to manage the high volume of data coming from the node and Postgres relational database to profile configurations.
- **Analytics blocks with prediction capabilities:** For power consumption prediction, the platform connects to the weather forecast system. Using forecast information and the consumer's energy consumption history, eSoftLink is able to predict tomorrow's and the following week's power consumption.
- **Non-intrusive load monitoring (NILM) capabilities:** NILM is the process of analyzing changes in the voltage and current going into a house and deducing what appliances are used in the

house as well as their individual energy consumption. Using AI, eSoftLink detects the power signature of types of devices and then classifies the power consumption per device class.

- **Clustering:** Clustering was done to understand and compare home power consumption to similar households (households with a similar number of occupants) so that the consumer can check if they are in the average consumption range.
- **Notifications:** managed by eSoftThings
- **Dedicated alerting block:** Subscribers can configure this alerting block and set some threshold for any data that they collect from the node.
- **Admin web panel:** for the mobile application, end user, or administration frontend.
- **Non-mandatory interfaces:** These consist of a customer data lake output (enabling customer retrieval of all their data and ability to compute spending) and capability to link the system with other customer databases.

The above features deliver the added value of eSoftLink to providers and consumers. eSoftLink can connect to a wide range of existing IoT sensors and devices. Coupled with integrated over the air (OTA) and device management capabilities, it provides customers with a highly dynamic, flexible and reactive tool to support their operations and business activities. The integration of a data analytics system and a messaging server provides users with real-time notifications and alerts on events of interest. eSoftLink also allows connection to external data lakes to enable long term storage and cold-analysis of acquired data. This allows extracting maximum value from any dataset on the fly and over time.

Results

“The mobile app is very well-rated on the Android market, and people are very happy about this application.”

eSoftLink is a versatile and robust end-to-end IoT platform that is designed to work stand-alone on customer infrastructure, on the Edge or in the Cloud. Its flexibility means it can serve as the integration platform between a provider's devices and infrastructure, and cloud service of their choice. eSoftLink provides real-time data collection, management, analytical and reporting tools that allow enterprises to benefit from the data that they collect quickly and efficiently.

eSoftLink's implementation for utility providers delivers real-time energy monitoring and reporting, with secure data storage and access. The eSoftLink stack offers a full range of REST APIs, so connecting frontend UIs such as mobile phone applications and web browsers is quick and easy.

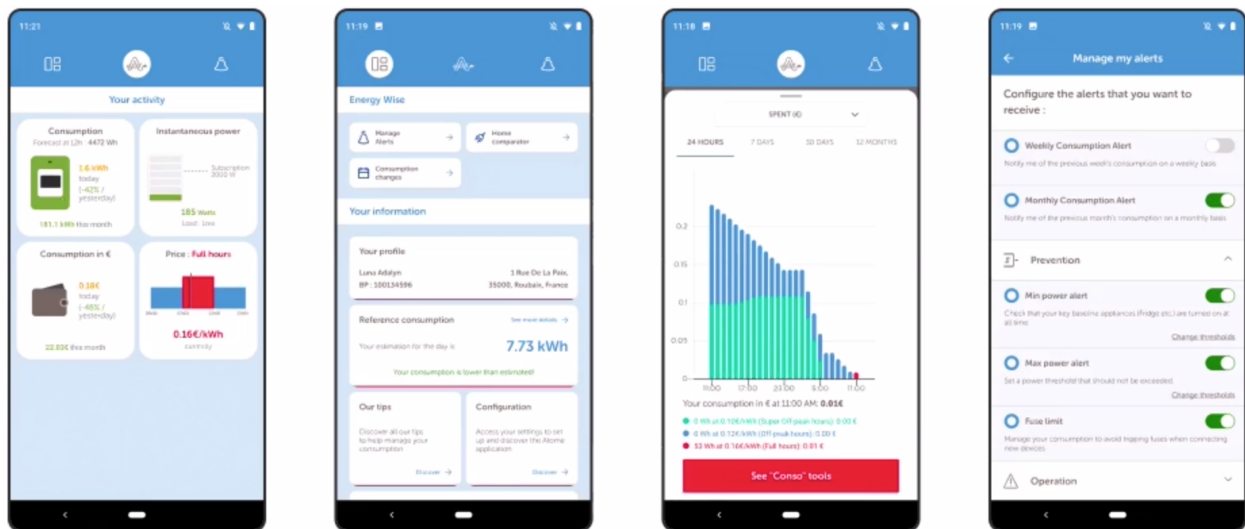
The eSoftLink consumer application and provider application are very empowering since they provide previously unavailable information and visibility in real time:

- The consumer app provides real-time information about consumption down to the device level, thereby allowing consumers to control home energy use. Consumers can instantaneously see the consumption difference they can make, which is motivating to change behavior.
- The provider UI empowers the utility company by allowing them to make sure they can service and support their consumers.

The mobile app

The mobile app provides visualization and configuration options as shown in the four screenshots below:

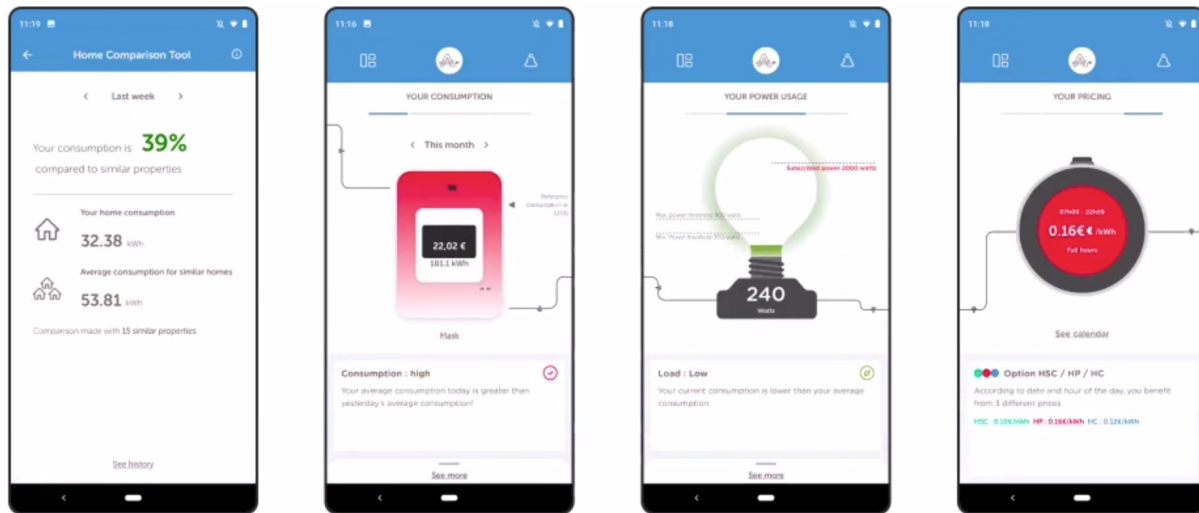
Sample Visualization from eSoftThings Customer Total Direct Énergie



1. The first dashboard shows consumption information, instantaneous power, consumption in euro, and price that is active at a given time.
2. The second dashboard displays profile information, tips, reference consumption, and configuration to manage your alerts or home comparison tool.
3. The third dashboard shows consumption in euros or kilowatts. It's a graph that you can have on 24 hours, 7 days, 30 days or 12 months, to get a granular view of your own consumption.
4. The fourth dashboard allows you to configure and manage your alerts (for example, if power consumption exceeds a threshold or nears the Fuse Limit).

The mobile app also has a home comparison tool, featured below, which shows the customer's home consumption relative to similar households. It also shows consumption in real-time, power usage, and bill-to-date.

Home Comparison Tool Dashboards



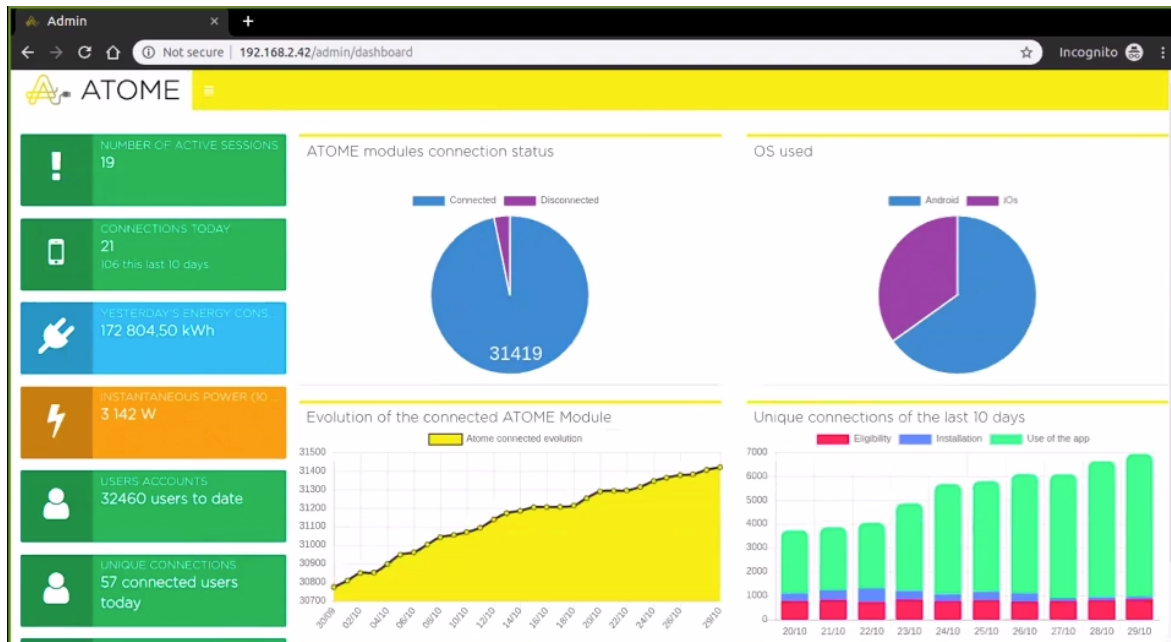
Admin panel that Total Direct Énergie uses to visualize all the data

eSoftLink's administration dashboards for the solution owner allow easy centralized configuration of platform and device parameters. Below are examples of the admin panel (Atome Direct Énergie) used by eSoftLink's customer Total Direct Énergie to visualize the data.

Atome, a patented solution based on eSoftLink technology, empowers residential consumers with knowledge of their home energy consumption. Atome combines real-time information with AI and individual customized deep learning. eSoftLink enables the end user of Atome to receive real-time info as well as monitor and forecast power consumption parameters through customized AI applications.

The admin panel's "Dashboard" menu visualizes the number of active sessions, connections per day, total energy that has been accumulated the previous day, instantaneous power, number of user accounts created, unique connections per day, and average time per session. Also visualized in the graphs are:

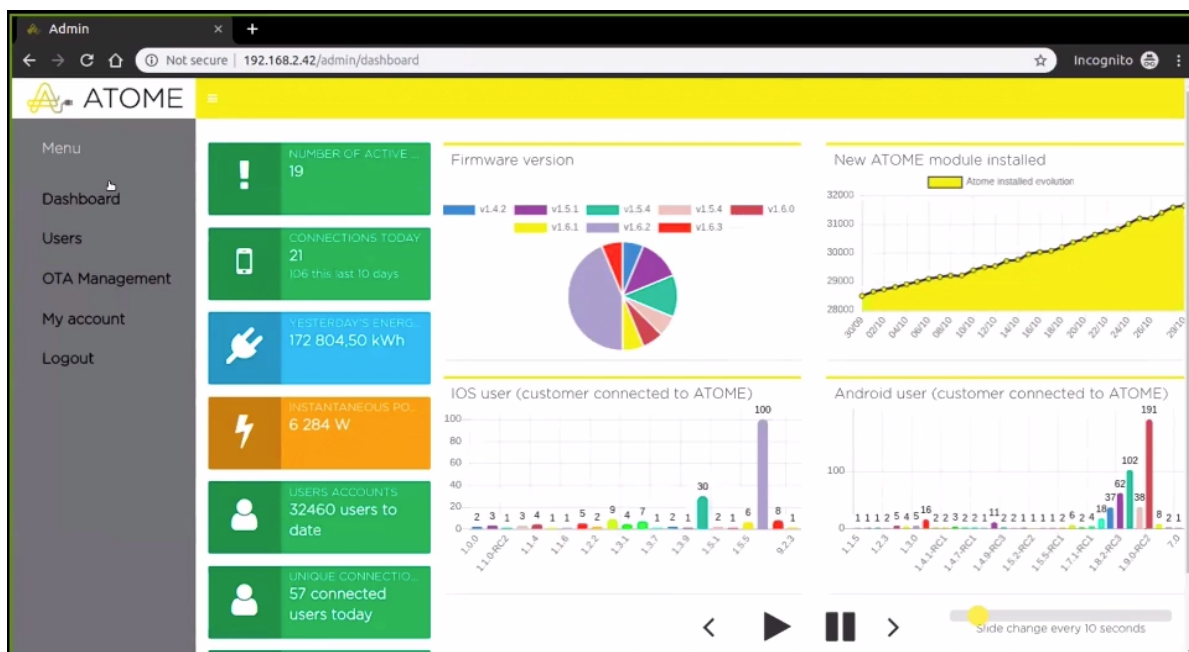
- Connected and disconnected ATOME modules
- OS used by end users (Android and iOS)
- The evolution of connected ATOME modules
- Unique connection of the last 10 days



The "Dashboard" also shows:

- Firmware version of the IoT node
- New ATOME modules installed
- App version for the iOS and Android users

This information allows doing system maintenance to ensure that the firmware upgrade has been successful and to show the number of devices that still need to be updated.



The admin panel's "Users" menu allows the solution owner to consult any user ID.

USER MANAGEMENT

BP number :

Name :

City :

Mail :

Phone type :

Phone app version :

PDL :

Subscription power :

GDPR state :

Account state :

ATOME Module state :

ATOME Pairing state :

ATOME Connection state :

Business case :

ATOME Firmware version :

Serial number :

Last percent of data completion :

Eligibility phase :

Export the result as excel file

BP number	Name	City	PDL	Mail	Eligibility phase	Business case	Account creation	Activ account	ATOME Connected	User	S/N	Cluster	Consult
100134596	Luna Adalyn	ROUBAIX	00000000561234	luna.a@orange.com	-	ATOME05	04/01/2018	✓	✓	normal	01-5017-00115	10/1010	Consu
104514394	Charles Alexander	MITRY MORY	22146020095067	alex@gmail.fr	-	-	Inconnue	✓	✗	normal	-	-	Consu
100120809	Jessica Bells	AULNOYE AYMERIES	01241244529339	jessica.bells@hotmail.com	-	ATOME01	25/01/2018	✓	✗	normal	01-5017-00423	-	Consu
105517777	Adam Bradshaw	ANGERS	09304630860188	adam.bi@me.com	-	ATOME05	22/03/2019	✓	✓	normal	01-3718-00961	10/1010	Consu
100142346	Simon Brooks	NOISY LE GRAND	22452677225713	s.brooks@aol.com	EL_STEP00	ATOME03	25/01/2018	✓	✗	normal	01-4917-00045	10/1010	Consu
100125138	Nathalie Cline	CALAIS	01559044815388	natal.cline@gmail.com	-	ATOME01	25/01/2018	✓	✗	normal	01-4817-00018	-	Consu
100647421	Brandon Davis	NEY	06512156263833	dede@hotmail.fr	-	ATOME01	10/01/2018	✓	✗	normal	01-3017-00007	-	Consu

Clicking on the selected user ("ATOME key" tab as shown below) can provide details on whether the IoT node has been paired and connected, whether it is plugged into the smart meter, and date of latest firmware update.

ATOME

Luna Adalyn

ATOME key | Phone application | Consumption monitoring | Meter | Notifications | Notifications state | Personal information

Statut :
 Paired : ✓
 Connected : ✓
 Plugged in : ✓
 Firmware updated at : 22/10/2019 10:07:18

Last data received : 29/10/2019 15:39:25
 Pairing date : 10/07/2018
 Hardware version : 5
 Software version : v1.6.1
 S/N : 01-5017-00115
 CID : 0306014517000037
 Eligibility phase : (unavailable data)
 Highest eligibility : (unavailable data)
 Gap between Atome frames : 1285 ms
 Wifi signal (RSSI) : -40 db
 Each signal level upper to this value is considerate as an excellent signal

Eligibility step	Step designation
EL_STEP00	Terms of use not validate
EL_STEP01	Terms of use validate
EL_STEP02_1	User has a Linky meter
EL_STEP02_2	User hasn't a Linky meter
EL_STEP03	User starts wifi cover tests
EL_STEP04	User logged on wifi. He is ready for the test
EL_STEP05	User moves to take the meter picture
EL_STEP06	User has taken meter picture
EL_STEP07	User run the wifi coverage
EL_STEP08	Wifi coverage it's good
EL_STEP08_1	Wifi coverage isn't good

The "Phone application" tab provides information about the mobile phone application, phone model, the application version.

ATOME

Luna Adalyn

ATOME key | Phone application | Consumption monitoring | Meter | Notifications | Notifications state | Personal information

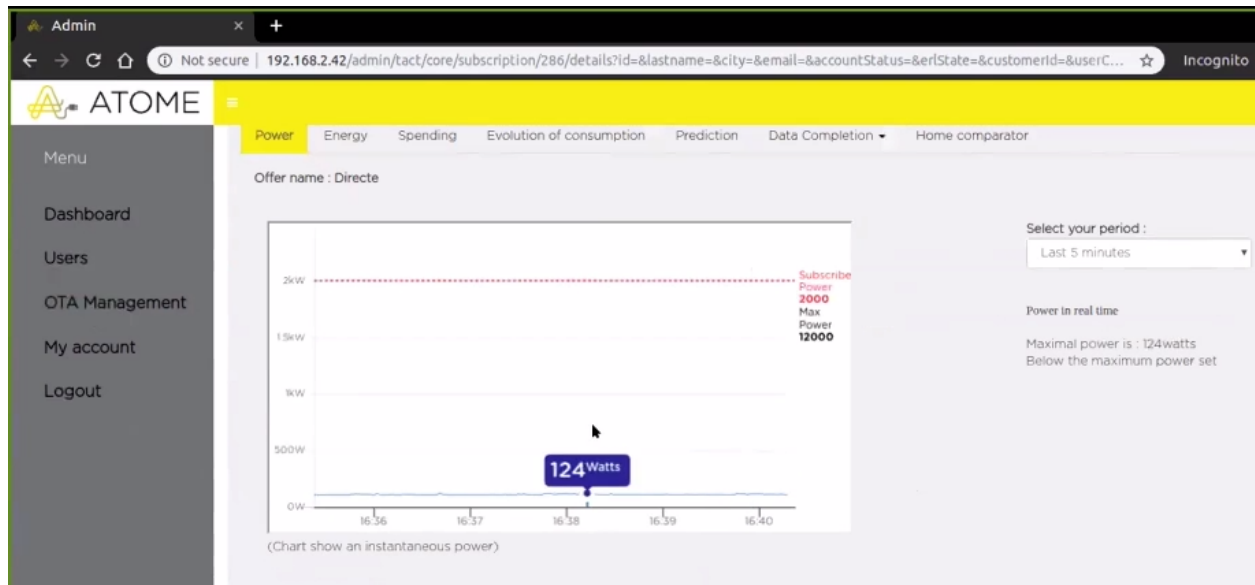
Phone application

Phone model : Android google Pixel 3 XL
 App version : 1.9.0-RC2
 Software phone version : 9
 Last connection at : 28/10/2019 à 10:44:06

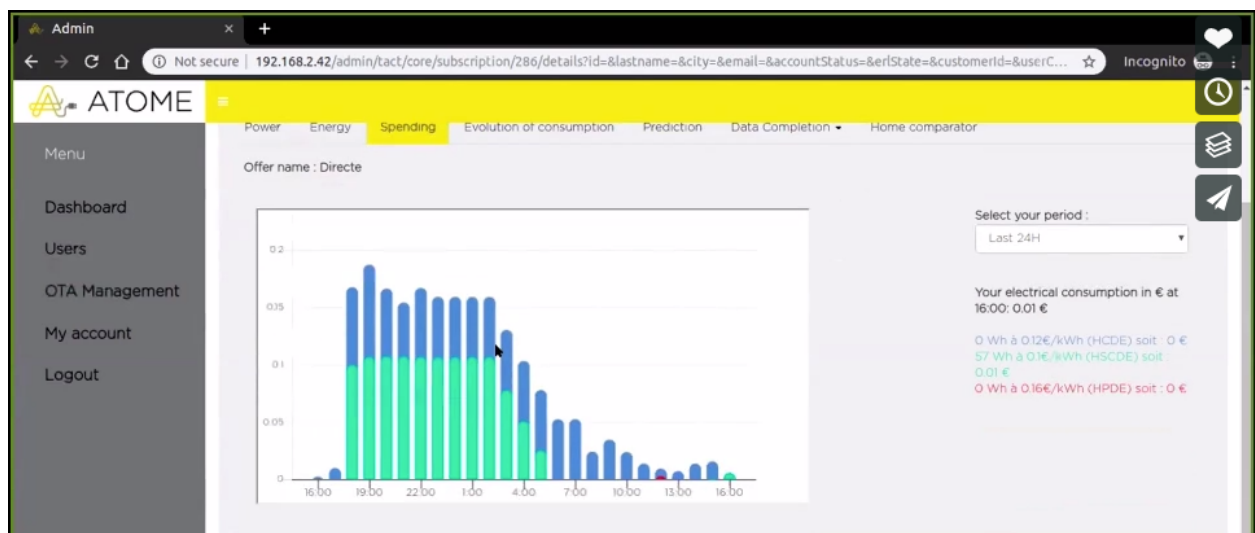
Associated device of this account (Select to obtain information) :

google Pixel 3 XL

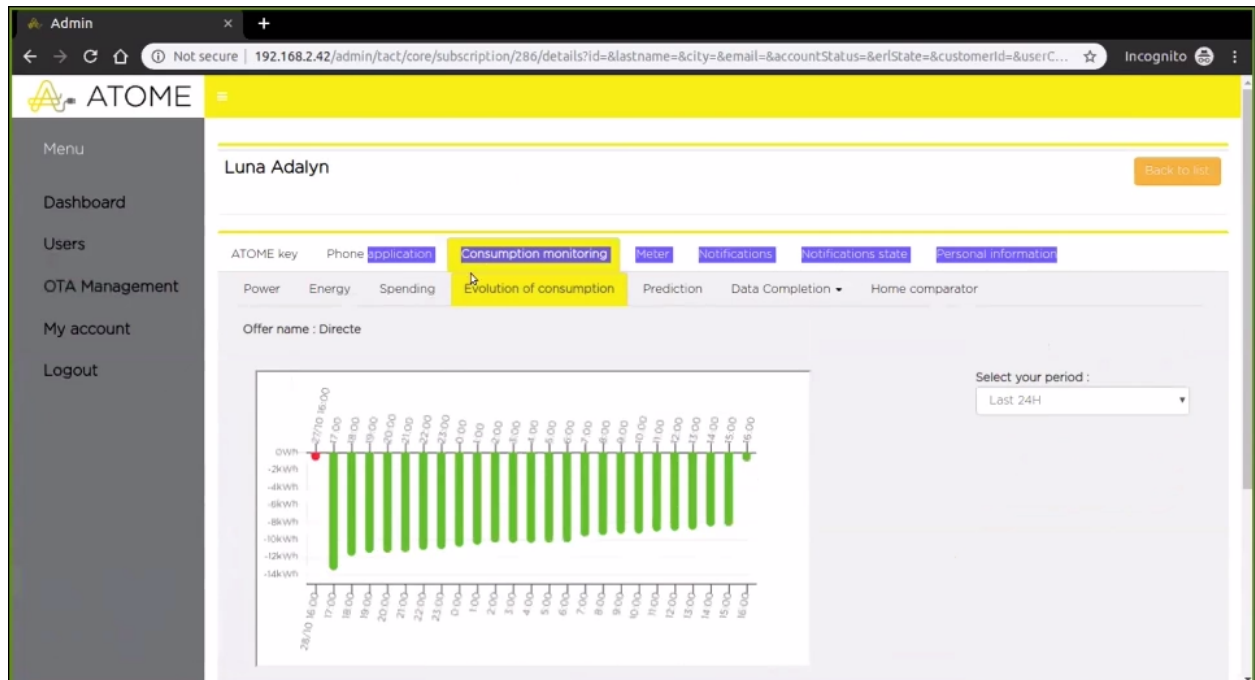
The "Consumption monitoring" tab provides figures and graphs.



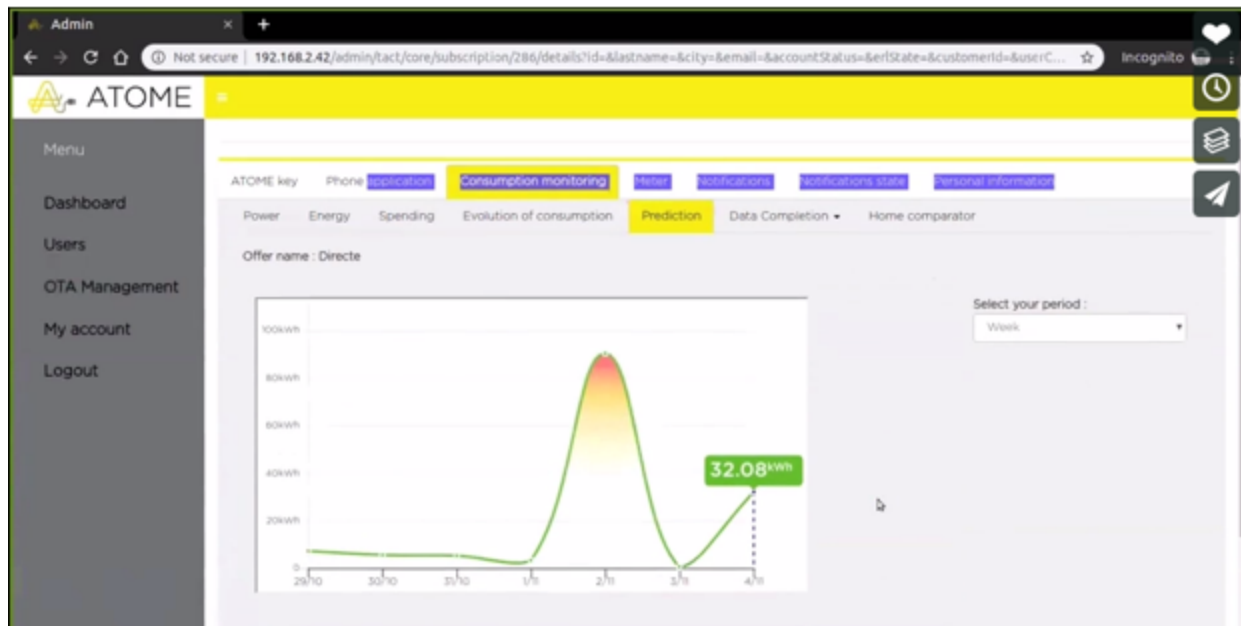
For example, the solution owner can view and visualize details regarding the power curve, energy and spending for a selected period.



The “Evolution of consumption” tab enables comparisons of consumption across periods (such current and previous month).

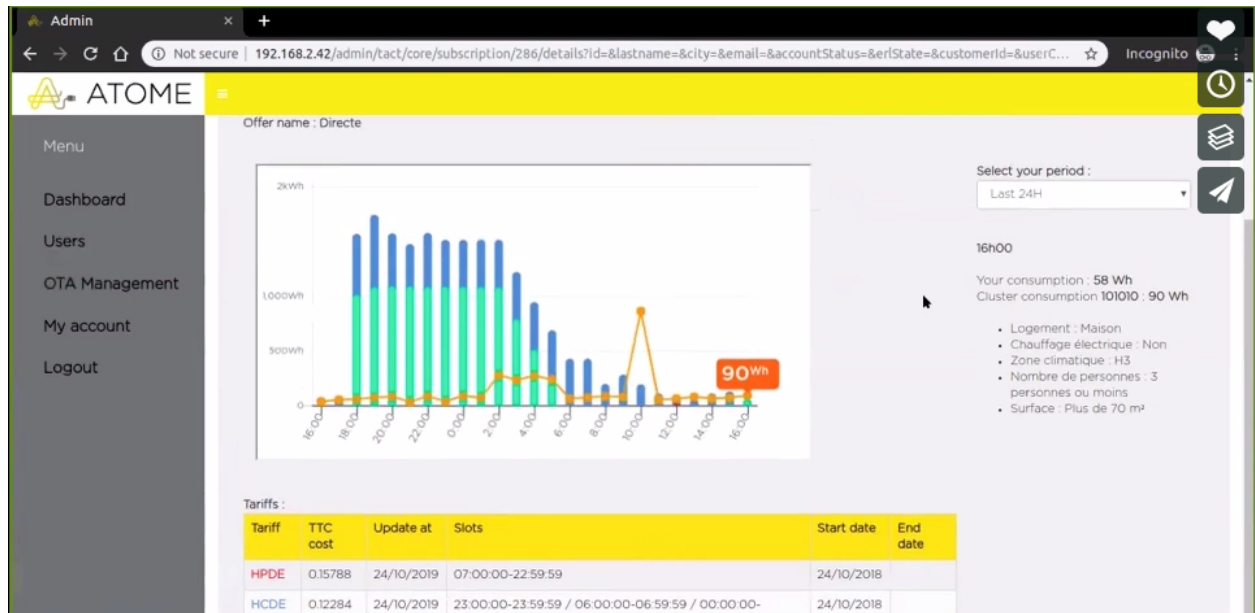


Also viewable in the "Prediction" tab are energy usage predictions based on weather forecast data.

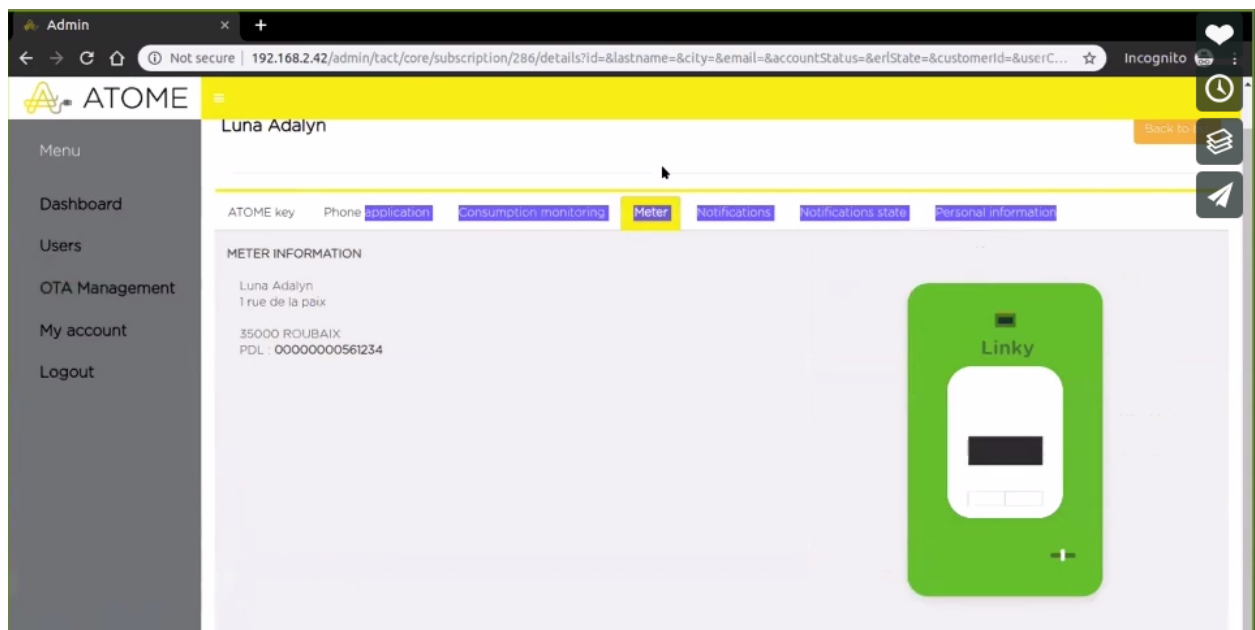


The "Data completion" tab is for debugging purposes.

The "Home comparator" tool makes home comparisons with similar households.



The "Meter" tab provides information about the meter.



The "Notifications" tab shows what type of alert and notification a given user selected and configured in their application.

Notification preferences for the phone model: google Pixel 3 XL

Power limit customize: ❌ | Min: 0 W | Max: 0 W
 Notification preferences for the phone model: ✅
 Energy limit customize: ❌ | Min: 0 Wh | Max: 50000 Wh
 Spending limit customize: ❌ | Min: 0 € | Max: 10 €
 Disconnect alert: ❌
 Expert mode: ❌

Notification preferences for the phone model: google Pixel 3 XL

Power limit customize: ❌ | Min: 0 W | Max: 0 W
 Notification preferences for the phone model: ✅
 Energy limit customize: ❌ | Min: 0 Wh | Max: 50000 Wh
 Spending limit customize: ❌ | Min: 0 € | Max: 10 €
 Disconnect alert: ❌
 Expert mode: ❌

Notification preferences for the phone model: google Pixel 3 XL

Power limit customize: ✅ | Min: 500 W | Max: 800 W
 Notification preferences for the phone model: ✅
 Energy limit customize: ❌ | Min: 0 Wh | Max: 50000 Wh
 Spending limit customize: ❌ | Min: 0 € | Max: 10 €
 Disconnect alert: ✅
 Expert mode: ✅

The “Notification status” tab is key for servicing maintenance requests by customers.

Ble status

Date	Message	Phone
16/07/2018 19:54:09	Bluetooth connection has been disconnected	iPhone 7 - IOS 10.3.2
16/07/2018 19:53:53	Unknown error with Bluetooth connection	iPhone 7 - IOS 10.3.2
16/07/2018 19:53:46	Bluetooth connection has been disconnected	iPhone 7 - IOS 10.3.2
16/07/2018 19:53:35	Bluetooth connection has been disconnected	iPhone 7 - IOS 10.3.2
16/07/2018 19:53:22	Bluetooth connection has been disconnected	iPhone 7 - IOS 10.3.2
16/07/2018 19:52:31	Bluetooth connection has been disconnected	iPhone 7 - IOS 10.3.2
16/07/2018 19:52:24	Bluetooth connection has been disconnected	iPhone 7 - IOS 10.3.2
16/07/2018 19:52:06	Bluetooth connection has been disconnected	iPhone 7 - IOS 10.3.2
16/07/2018 19:51:05	Prm received invalid	iPhone 7 - IOS 10.3.2
16/07/2018 19:51:05	Unknown CID	iPhone 7 - IOS 10.3.2
16/07/2018 19:51:05	Prm received invalid	iPhone 7 - IOS 10.3.2
16/07/2018 19:51:05	Prm received invalid	iPhone 7 - IOS 10.3.2
16/07/2018 19:51:05	Prm received invalid	iPhone 7 - IOS 10.3.2
16/07/2018 19:51:05	Prm received invalid	iPhone 7 - IOS 10.3.2
16/07/2018 19:51:05	Prm received invalid	iPhone 7 - IOS 10.3.2
16/07/2018 19:51:05	Prm received invalid	iPhone 7 - IOS 10.3.2

The “Personal information” tab provides some personal information as well.

Admin | 192.168.2.42/admin/tact/core/subscription/286/details?id=&lastname=&city=&email=&accountStatus=&erlState=&customerId=&userC...

ATOME

Luna Adalyn

Menu

Dashboard

Users

OTA Management

My account

Logout

ATOME key Phone Application Consumption monitoring Meter Notifications Notifications state Personal information

Last name: Adalyn

First name: Luna

Address1: 1 rue de la paix

Address2:

Zipcode: 35000

City: ROUBAIX

Property type: House

Phone: 0701020304

Phone2: 0701020304

Subscription: 100134596

Email: luna.a@orange.com

Heater type: Collective

Household members: 5

area: 258

The "OTA Management" menu allows the solution owner to see and post the latest firmware that they want to push on the device. In this implementation, the device will daily check on its own if there is firmware that is more recent than the one currently running and will then retrieve it. The solution owner can manage this tool by firmware version, by other version as well, and can enable or disable some firmware, so it's quite a flexible tool.

Admin - Ota Entry List | 192.168.2.42/admin/tact/ota/otaentry/list

ATOME

Menu

Dashboard

Users

OTA Management

My account

Logout

Filters Add

	Provider	Board	Version Firmware	Version Updater	Enable	Action
<input type="checkbox"/>		1	4	2	0 no	Show Edit Delete
<input type="checkbox"/>		1	5	1.060.003	0 no	Show Edit Delete
<input type="checkbox"/>		1	5	1.060.301	0 no	Show Edit Delete
<input type="checkbox"/>		1	4	1.060.302	0 no	Show Edit Delete
<input type="checkbox"/>		1	5	1.060.201	0 no	Show Edit Delete
<input type="checkbox"/>		1	6	1.050.601	0 yes	Show Edit Delete

All elements (6) Delete OK Download - 1/1 - 6 results - label_per_page 32

What's next for eSoftThings?

For the next iteration, eSoftThings is working on improving two recently deployed functionalities:

- Adding blockchain with the capability to do Smart Contract: Smart Contract has been an increasingly frequent request as there are now some microgrid capabilities with energy producers who want to sell their energy locally to people in the neighborhood. The Smart Contract application offers people a place to meet so that they can negotiate a contract and ensure that the renewable energy is well used within the local area.
- Adding NILM capabilities: eSoftLink is able to classify the big contributors to a consumer's bill based on the device's power signature. This visibility enables consumers to save energy and thereby lower their energy bills.

About InfluxData

InfluxData is the creator of InfluxDB, the leading time series platform. We empower developers and organizations, such as Cisco, IBM, Lego, Siemens, and Tesla, to build transformative IoT, analytics and monitoring applications. Our technology is purpose-built to handle the massive volumes of time-stamped data produced by sensors, applications and computer infrastructure. Easy to start and scale, InfluxDB gives developers time to focus on the features and functionalities that give their apps a competitive edge. InfluxData is headquartered in San Francisco, with a workforce distributed throughout the U.S. and across Europe. For more information, visit influxdata.com and follow us [@InfluxDB](https://twitter.com/InfluxDB).

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