

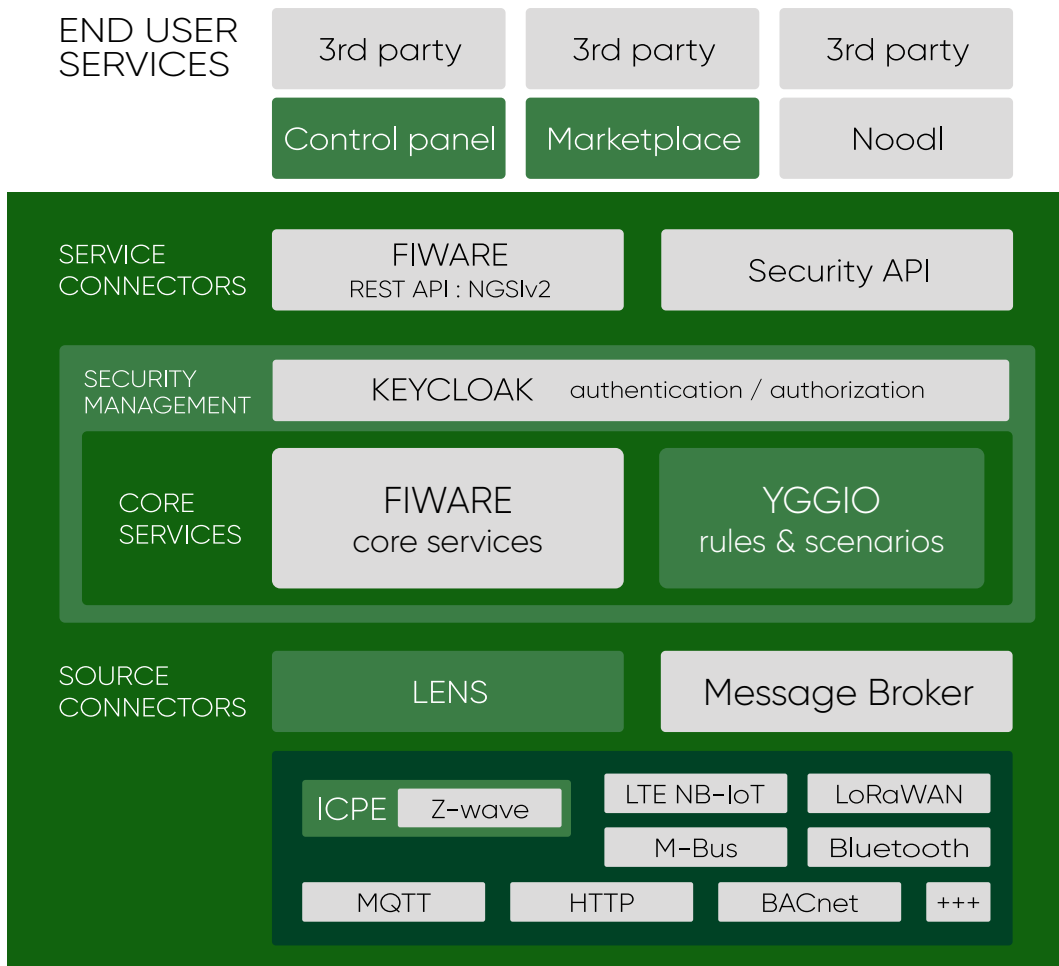


# YGGGIO

## platform overview

The horizontal integration platform for connecting smart end-user services with IoT networks and devices.

- multipoint-to-multipoint connectivity with device and service interoperability
- integration with IoT devices from multiple network technologies and standards
- standard APIs that allows service providers to focus on application development
- security and personal data privacy (GDPR)
- IoT network control panel for full control of the IoT network and the devices



Ygggio implements the FIWARE API and other standards and open source libraries (gray boxes) that minimizes lock-in effects.

The security layer handles identity and access management that protects the core services as well as the devices.

Ygggio consists of a set of micro services that all communicate over an AMQP standard bus.

Ygggio has a number of protocols implemented today, and new protocols are added continuously.

## Features overview

**API** (FIWARE NGSIv2 and security)

**Login** (OpenID)

**Authentication** (OAuth2)

**Protocol Security** (TLS 1.3)

**Account Management**

**Access Rights Management** (ARMS)

**FIWARE Data modeling**

**Rule engine** (Scenarios)

**Protocols:** MQTT, AMQP, BACnet, WebSocket, RestAPI, TCP, UDP, and more

**Device handlers:** LoRaWAN, OpenWRT, CTS gateway, BoTech, Elvaco, Assa ARX, PLC system, and more

**Supported IoT-protocols:** Z-Wave, LoRa, BacNet, Bluetooth, LTE NB-IoT, and more.

## FIWARE implementation

<https://www.fiware.org/>

FIWARE is a curated framework of open source platform components to accelerate the development of smart solutions. Yggio implements some core components of FIWARE, for instance:

**FIWARE NGSIv2 API** which is a simple yet powerful Restful API enabling to perform updates, queries or subscribe to changes on context information. (<http://fiware.github.io/specifications/ngsiv2/latest/>)

**FIWARE Context Broker**, that manage context information in a highly decentralized and large-scale manner. (<https://www.fiware.org/developers>)

## Security by KEYCLOAK

<https://www.keycloak.org/>

Keycloak is an open source software product to allow single sign-on with Identity Management and Access Management, under the stewardship of RedHat.

Among the many features of Keycloak include Single sign-on, Social login, 2-factor authentication, LDAP integration, and more.

To this Yggio Access Rights Management System (ARMS) securely handle which users and services have access to different IoT devices and their data.

## LENS

The Yggio network integration service. It manages all protocol translations, utilizing the message broker for all communication.

## Message Broker

Yggio uses an open source MQTT/AMQP message broker both for internal communication between microservices, as well as communication with sensors, etc., over different network protocols.

## Rules & Scenarios

A versatile and powerful mechanism for implementing event handling in the network. A basic use case is a power switch turned on that triggers a rule turning on all the lamps in the house. The rule engine has general support for event handling making it possible to set up arbitrarily complex rules.

# The open Yggio

**Creates the right conditions for efficient and future-proof digitalization**

**Open for innovation and new business.**

Anyone can provide sensors and data and anyone can develop new services.

**Open marketplace**

A service developed for one customer can easily be marketed and installed for other customers through a supplier-independent marketplace.

Service providers gain access to new markets and revenue opportunities.

Yggio's customers receive an ever-expanding portfolio of services, to offer their customers.

**Open to connect**

Yggio's sharing mechanisms create a cross-functional infrastructure consisting of both private, shared and fully open IoT devices that can be used simultaneously by many different users and services.

**Open APIs and Standard**

APIs and data models are based on the FIWARE standard which minimizes lock-in effects.

Yggio already supports Z-wave, BACnet, M-Bus, LoRa, Bluetooth, LTE NB-IoT, and more, and new protocols are being added continuously.

**Open and secure**

All access to platforms, devices, and data is authenticated and meet GDPR's privacy protection requirements.

Sensitive is a rapidly-growing innovation company focused on delivering advanced IoT solutions.

Yggio empowers smart cities, facility managers, home care providers, agriculture, waste management, and more, delivering an ecosystem based on a truly open platform. The only way forward in a fast-growing and constantly changing industry. Co-creation provides greater customer value and through collaboration, Yggio is always at the forefront of technology.

Founded in 2013 and based in Lund, Sweden

Yggio.com  
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**SENSATIVE**  
empowered by data

