

Monitoring the energy consumption of the electrical appliances at different work stations and buildings.

OVERVIEW

The application was developed for smart energy management system. Monitoring the energy consumption of the electrical appliances at different work stations and buildings.

Here we connect the energy meters to a common gateway device. Gateway device will connect to the cloud and publish the time series data to the cloud. To make work efficient we have a multiple gateways connected

Industry ::Energy Management

- AWS
- IOT
- EdgeLink
- Gateway
- Grafana
- Influx DB
- python
- nodejs
- GO

PROBLEM STATEMENT

- Smart energy management of electrical devices like AC, Light, Motors in buildings.
- Monitoring excessive usage of energy.

Setting a common gateway device which will capture energy meter data and send to the cloud.

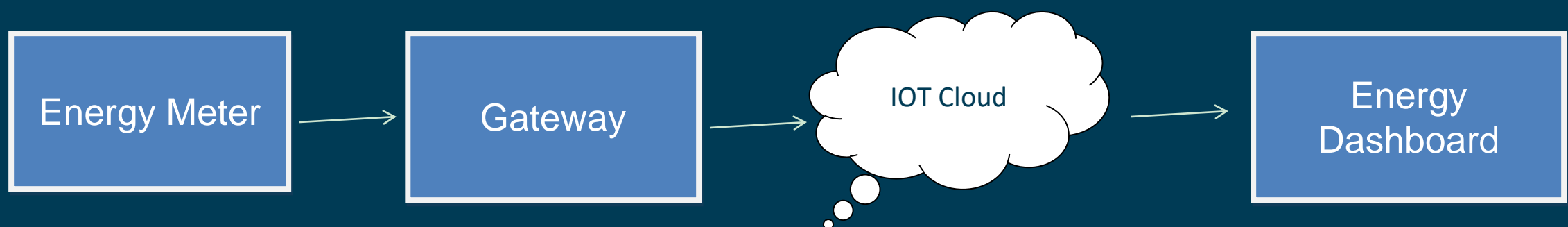
- Reporting wastage of energy by using alert notification.

CHALLENGES:

Overall Architecture:

- ✓ Continuous monitoring of the Energy meters state.
- ✓ Sending time series data continuously to the cloud.
- ✓ Sending the alert notification to the user on threshold reached via Email, Telegram.
- ✓ Remotely controlling the gateway device in a secure VPN connection.

APPLICATION FLOW:

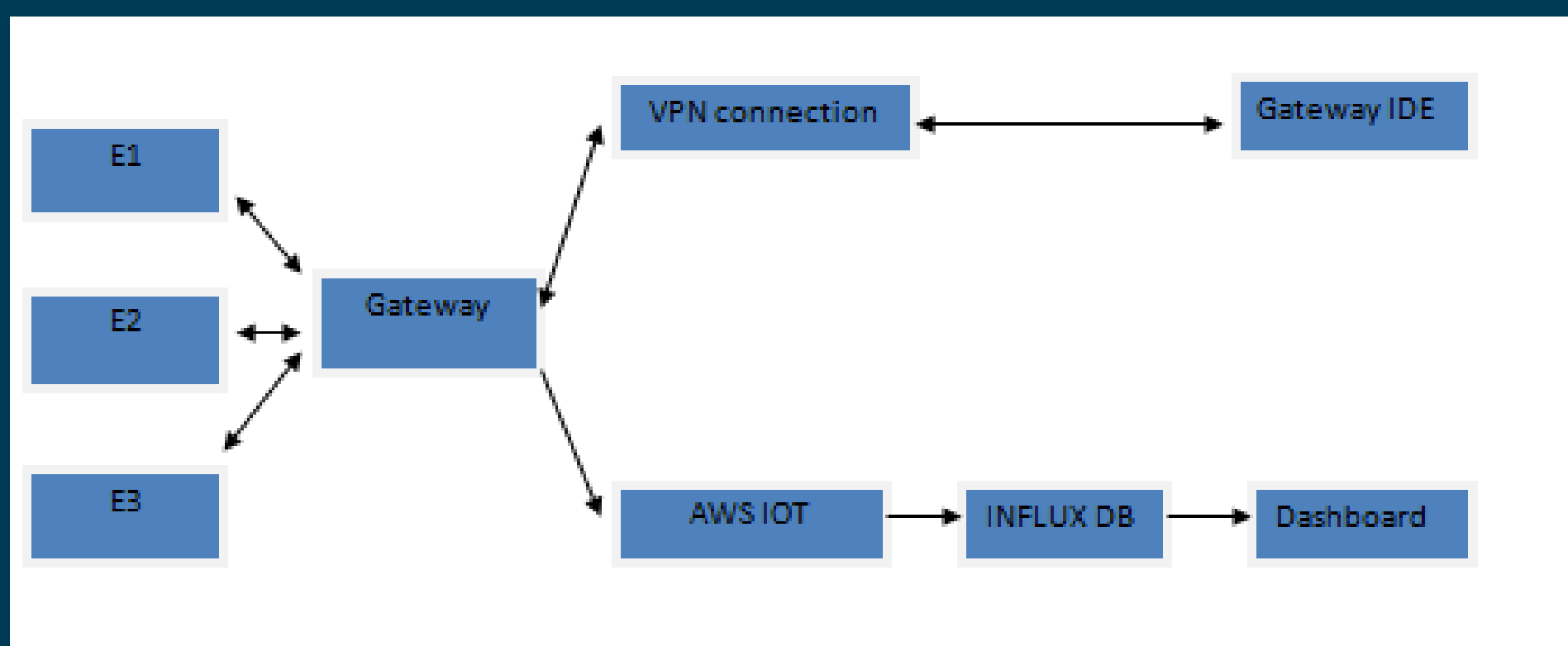


The Energy meter will capture the important data such as Average current, Real energy etc. The gateway will be connected to multiple energy meters, the data received from the energy meters will be updated to the cloud using MQTT protocol.

The real time data will be captured in the database, here we will be using the INFLUX DB.

The data received will be represented in the graphical format to the user using framework called GRAFANA.

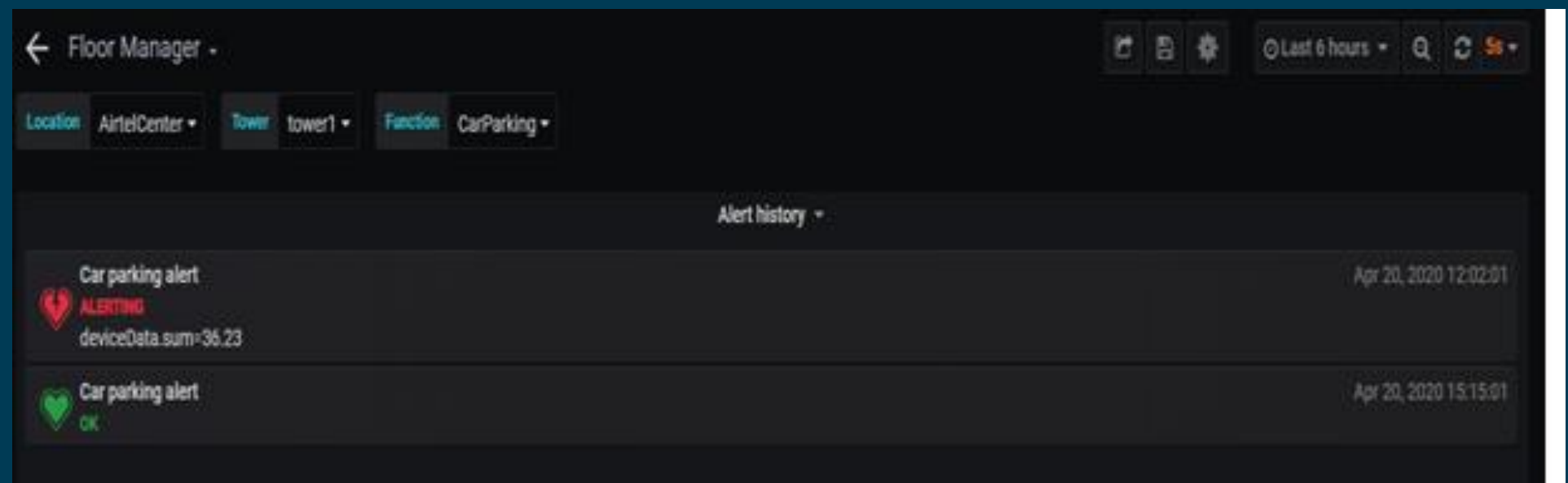
Overall Architecture:



HOME PAGE



ALERT PANEL



ORGANIZATIONAL SWITCH

