# Virtual Power Plant design document

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**Abstract**

The present paper documents the design phase of a new integrated Virtual Power Plant platform.

## Contents



## 1 Overview

The purpose of the Virtual Power Plant (VPP) platform is to:

- receive measurements from sensors deployed in a building.
- receive current and forecast information from external sources on grid load, electricity price and more.
- process measurements and external information to make decisions on power usage.
- actuate devices deployed in a building to implement abovementioned decisions.

The platform will consist of one main server application with an attached database.

## 2 Database design

The database will reside in a PostgreSQL DBMS.

# 3 Application design

The application will be programmed in object-oriented Python, using Python processes to enable concurrent processing.

Key classes have been identified to form a static structure which is shown in figure 1 and elaborated below:

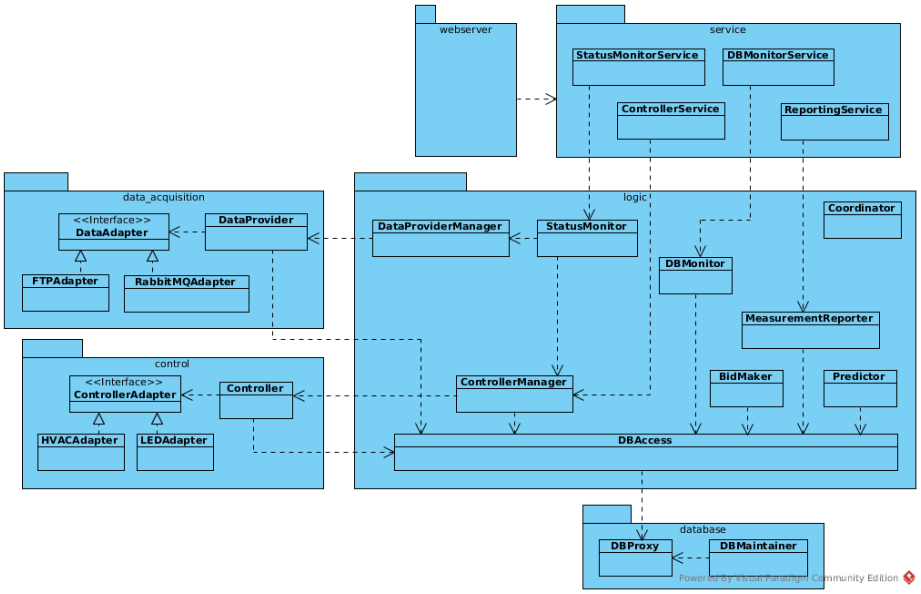


Figure 1: Class diagram