




IoT in DoT Building for Monitoring Resources Consumption

Outline

- ❖ System architecture
 - ❖ Hardware
 - ❖ Software Architecture
 - ❖ Example Data
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Components of the Solution



Electrical Power Monitor

- Real time Power consumption monitoring based on floors.
- Report on hourly & daily basis.



Water Consumption Monitor

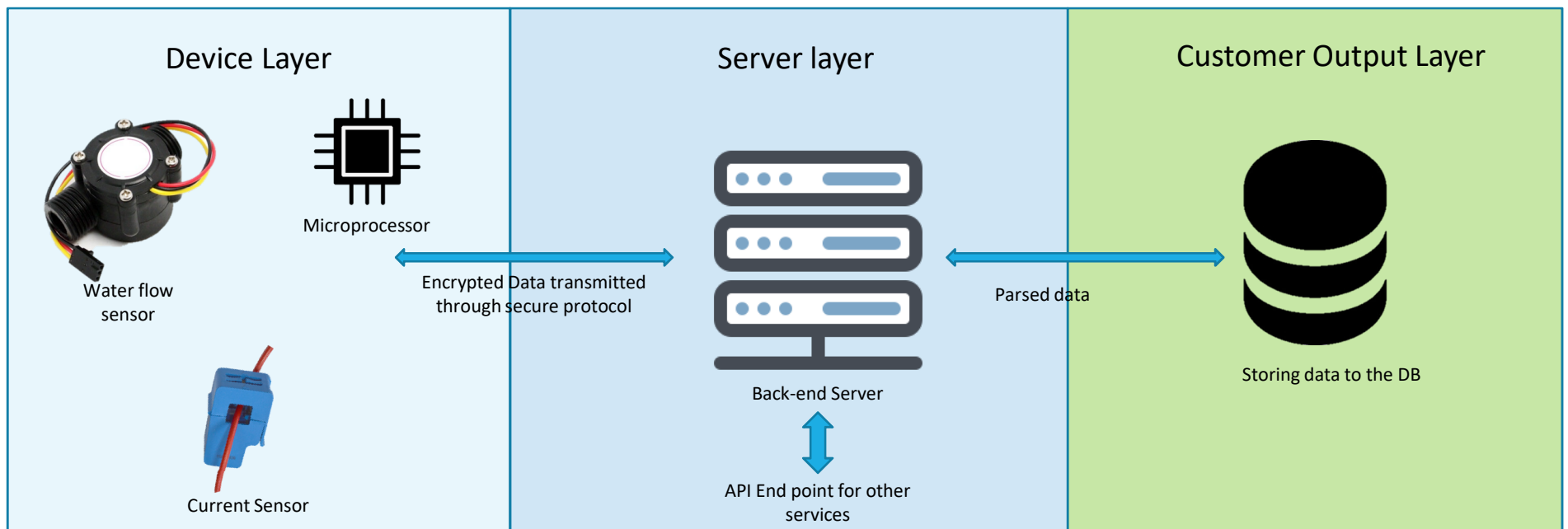
- Real time water consumption monitoring
- Report on hourly & daily basis.



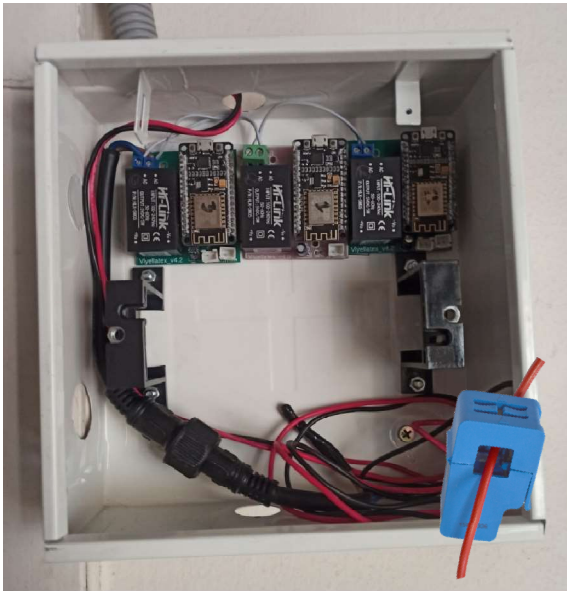
Motion Based Lighting System

- Autonomous Lights to operate only on low light & motion
- Save energy while no occupancy

System Architecture



Hardware Introduction



Power monitoring unit

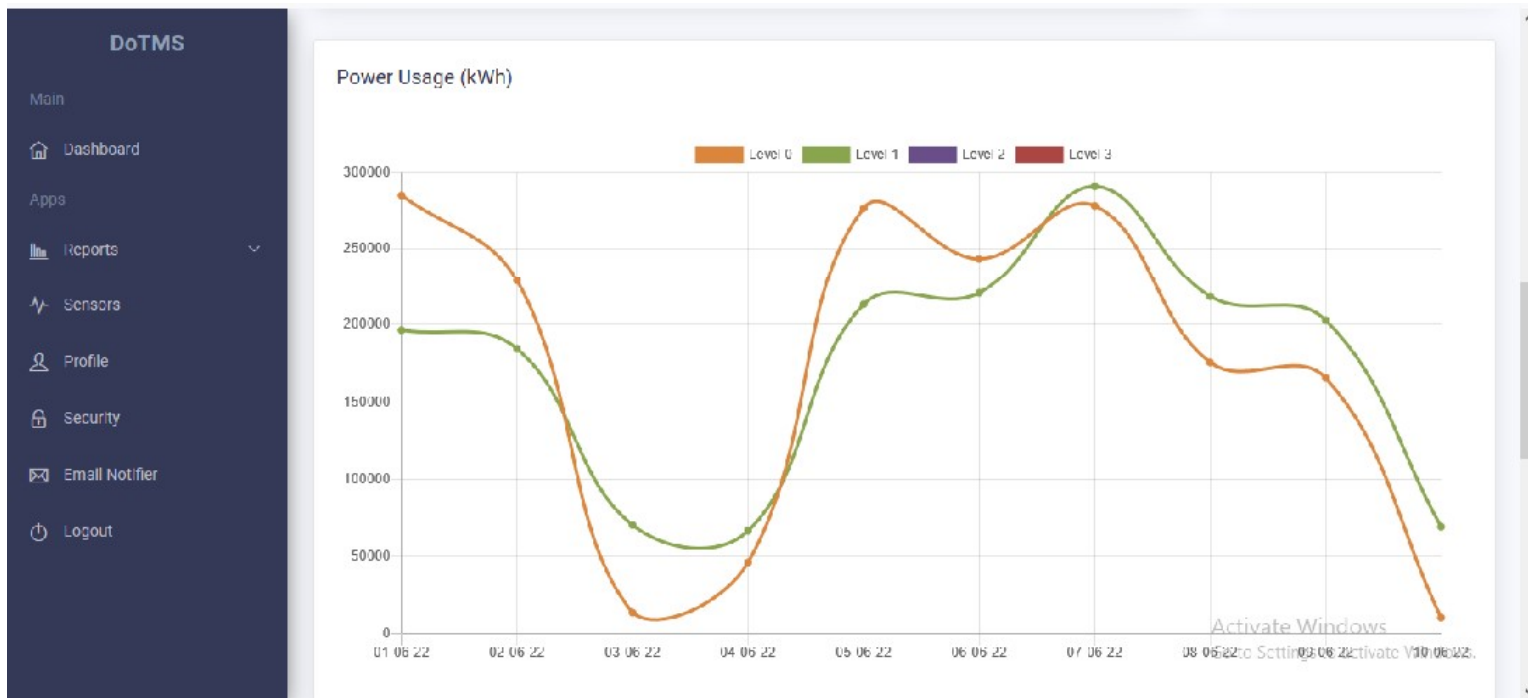


Water flow monitoring unit



Motion activated lighting

Management Page



Usages data page

The screenshot displays the 'Usages data page' in the DoTMS application. The page features a dark blue sidebar on the left with navigation options: Main, Dashboard, Apps, Reports, Sensors, Profile, Security, Email Notifier, and Logout. The main content area is titled 'Report Between: Jun 01, 2022 - Jun 10, 2022' and includes a 'Report / Daily' dropdown menu. Two data tables are presented: 'Power Usage (kWh)' and 'Water Usage (Liter)'. The Power Usage table has columns for Date, Level 0, and Level 1, with a 'Download' button. The Water Usage table has columns for Date and Volume. A Windows watermark is visible at the bottom right of the page.

Power Usage (kWh)

Date	Level 0	Level 1
2022-05-01	285050	196466
2022-05-02	228532	184450
2022-05-03	13773	70317
2022-05-04	46126	66574
2022-05-05	276555	213154
2022-05-06	243281	220469
2022-05-07	278198	290895
2022-05-08	175604	218233

Water Usage (Liter)

Date	Volume
2022-06-01	2087
2022-06-02	1730
2022-06-03	606
2022-06-04	575
2022-06-05	2633
2022-06-06	2566
2022-06-07	1999
2022-06-08	1414