DISTRIBUTED STORAGE SYSTEM

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Overview

To implement a software system for monitoring and managing the physical inventory levels from a remote location. The inventory data which is fetched from the scaling device needs to be displayed in real time by the software system. Furthermore, the software system should be able to store the log history of inventory data and should be able to scale up flexibly with the increase in the number of warehouse components.The analysis of inventory data is also a major concern which can result in future order and stock replenishment forecasting.

Goals

- Interfacing the scaling device with the Raspberry pi.
- Establishment of real time communication via MQTT protocol.
- Development of storage for different variants of two warehouse components.
- GUI Dashboard development
    - To display the inventory data
    - To save/log the inventory data
- Analysis of Inventory information.

Specifications

- Scaling device : PCE-BSH-6000/PCE-BSH 10000
- Microprocessor : Raspberry pi
- Communication : MQTT

Milestones

- Understanding the scaling device interface details and explore the different ways to interface it with Raspberry Pi.
-Understanding the warehouse component’s features like unit weight,storage location,type etc.
-Parsing the interface data and then processing the data for the accurate identification of the warehouse component.
-Data communication over MQTT using pub/sub model
-Implementing the dashboard to view the inventory data levels of each warehouse component and also the provision to store/save it’s inventory history
-Incorporating an analysis functionality to forecast the future order for timely stock replenishment.