

CLOUDPI - Cloud based Storage System using Raspberry Pi

Abstract

The aim of this project is to develop a cloud-based storage platform using a **Raspberry Pi server**. The platform will have a web-based interface, created using **React JS and HTML/CSS**, that will allow users to upload and download files to and from the cloud storage.

The backend of the platform will be built using **Django Python**, and the frontend and backend will communicate with each other via **APIs**. The Raspberry Pi server will act as the central point of storage for the files uploaded by users, and will provide access to these files over the internet.

To ensure the security of the platform, several **access control mechanisms** will be implemented. These include authentication, authorization, encryption, access control lists and file system permissions. Input validation and anti-virus scanning will also be used to prevent malicious inputs from being uploaded to the cloud storage.

The project will involve the installation and configuration of software and hardware components, as well as the development of the web-based interface and **backend APIs**. Testing will be performed to ensure that the platform functions correctly and securely.

The completed platform will provide a simple and secure way for users to **store and access files** in the cloud, using an **inexpensive and easily deployable** Raspberry Pi server. This project can be extended to support additional features such as file sharing, collaboration, and integration with other cloud services.

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