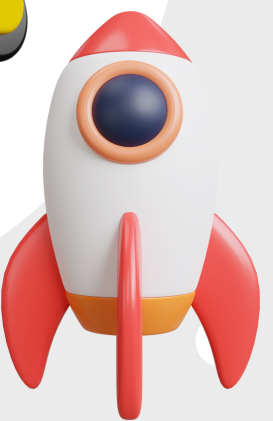# MED-NET

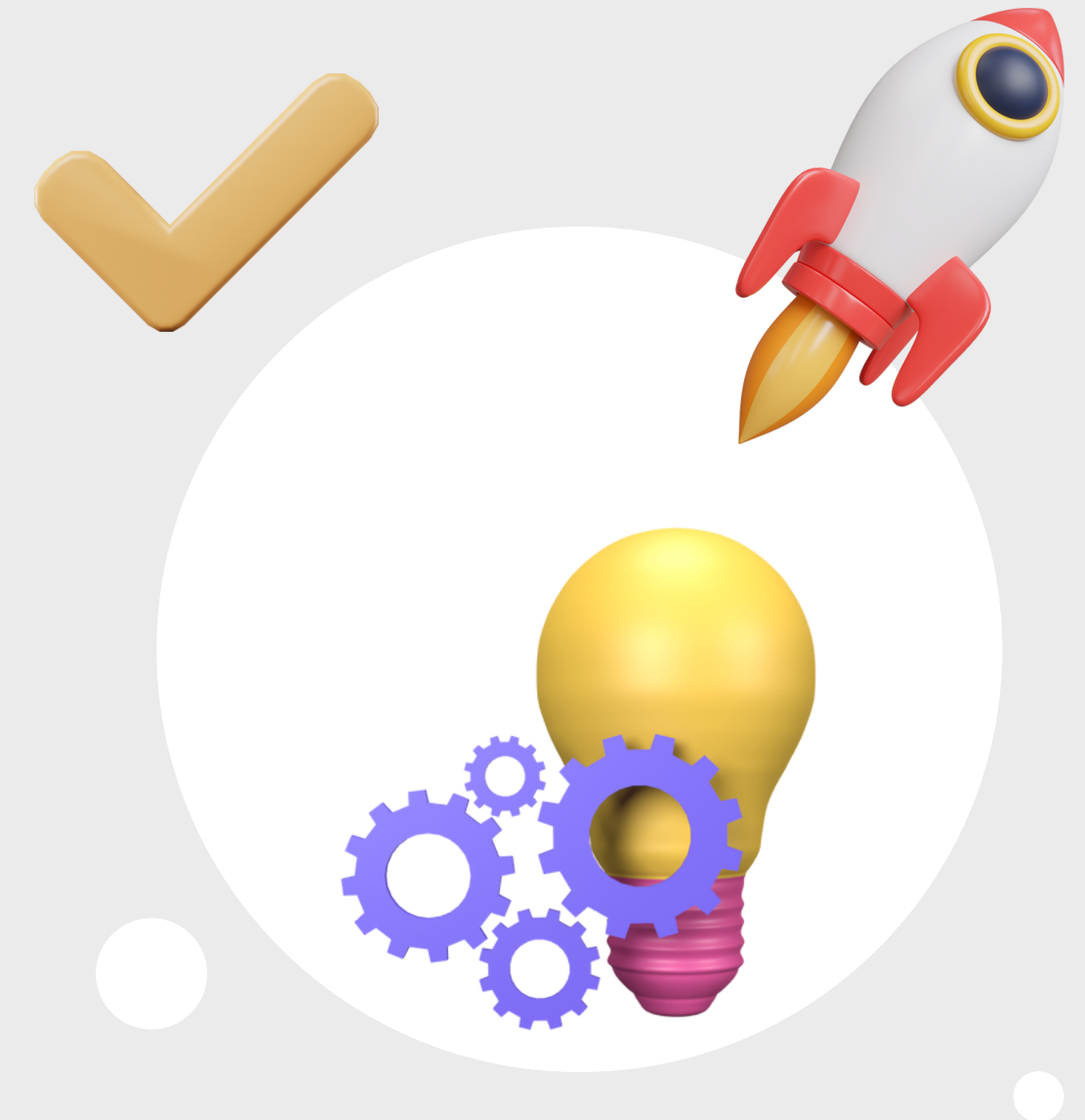Hassle-free secure transfer and management of your health data

MED-NET

The Problem

- Living in a technologically advanced society doesn't stop us from getting ill!!
- 4 out of 10 adults have a higher risk of developing a serious illness.
- Every time one gets ill need to go health center or hospital, and every time a new health record is created with the latest report about the person's health.
- The more often a visit, the health record changes based on the doctor and the progress one make due to certain prescriptions.

- It's quite tough to maintain all your records in the same place safely.
- People quite often want to change their hospital and doctor, so they need to get all their data transferred to another hospital to which they wanna move, but getting them is not as easy as a lot of procedures imply.
- Patients don't have control over their data, their data is used by companies for targeted marketing and product sales.
- Also, in times of emergency, a crucial time is lost in making the elementary diagnosis of the patient, like knowing the blood group, any serious health ailments, etc.
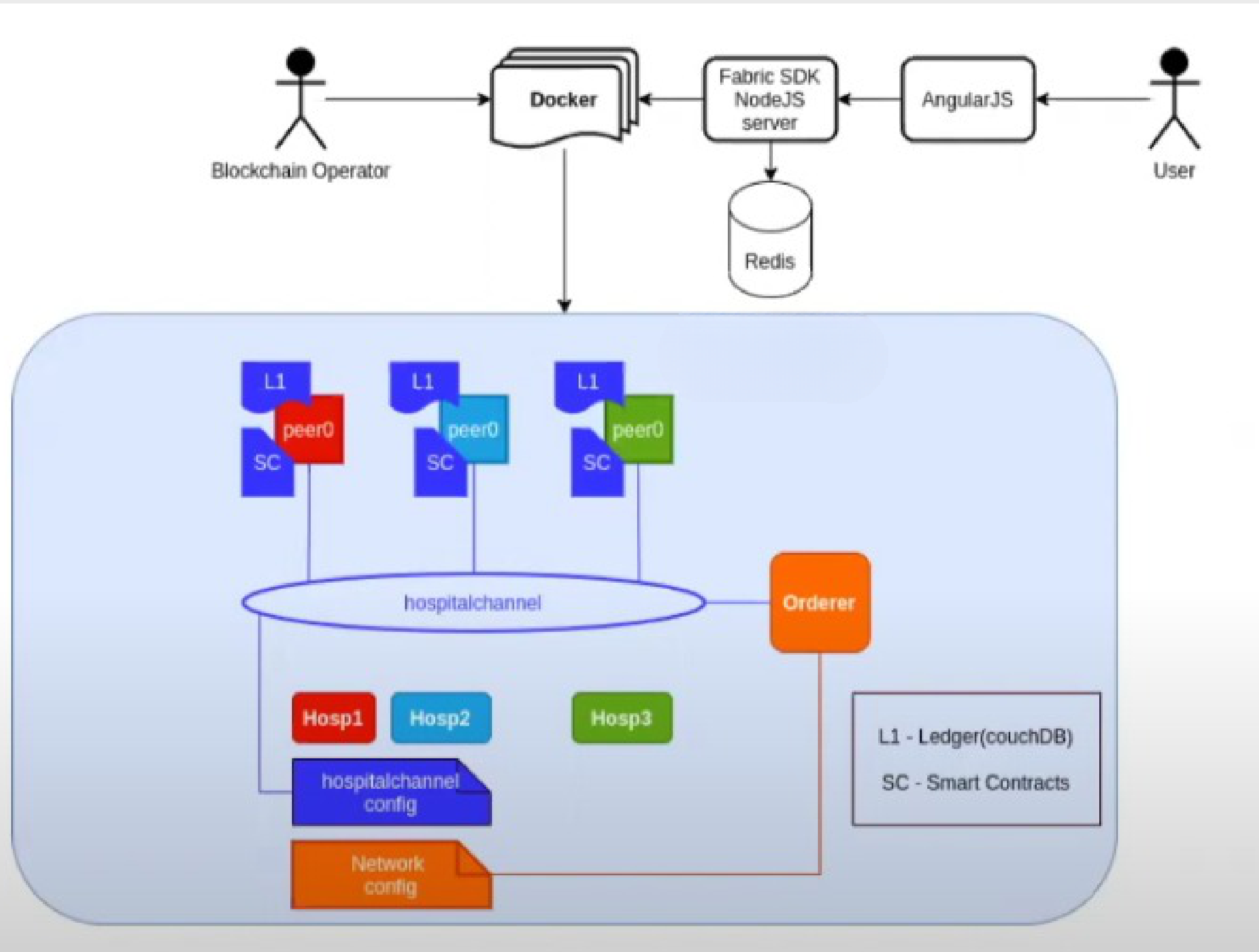
The Solution

- The solution is an interoperable health record system.

- MED-NET is a system architecture that allows the electronic sharing of patient information between different EHR systems and healthcare providers, improving the ease with which doctors can provide care to their patients and patients can move in and out of different care facilities.

- Blockchain provides a mechanism to anonymize data and ensure the data cannot be tampered with or forged.MED-NET will be block-chain based.

- It will use public key cryptography to create records that are time-stamped and immutable. Copies of these data records will be stored across thousands of nodes on a digital network. Changing these records at each node becomes an impossible task and prohibitively expensive, making the records reliable.

The Architecture

- Smart contacts eliminate the need for intermediaries, thus improving efficiency and transparency.

- A single system of health records offers faster diagnosis, affordable patient care, and reliable diagnosis communication without mistakes.

- We have a contract owner whose only task is to add and remove Hospitals from the contract. Hospitals also have a manager which is at the top of the hierarchical structure inside the hospital. The added hospitals have the power to add/remove patients, Add/Update the patient's EHR.

- In the case of an emergency, if a person is admitted to a hospital with no medical history, the hospital can request a transfer of EHR from the hospital where he is a patient.

- The transfer of EHR can only be done by the manager of the latter hospital. The patient can choose to change hospitals, and their EHR would be transferred immediately, and the previous hospital would lose the authorization to view/update the patient's EHR.

Proposed Technology Stack

- Nodejs is an open-source, cross-platform JavaScript run-time environment that executes JavaScript code server-side.

- Angularjs is a progressive framework for building user interfaces.

- Redis is an open source (BSD licensed), in-memory data structure store, used as a database, cache and message broker.

- Bootstrap is a free and open-source front-end Web framework. It contains HTML and CSS-based design templates for typography, forms, buttons, navigation and other interface components, as well as optional JavaScript extensions.

- Docker is a computer program that performs operating-system-level virtualization, also known as Containerization.

Team Members

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