ADVANCEMENT OF FOOD INDUSTRY USING BLOCKCHAIN TECHNOLOGY

Abstract

Inside a market consisting of sellers, buyers, shippers, banks and other participants, offers can be published by the sellers at a certain price for a specific buyer, while the others to buy at the standard price.

The details of the proposed deals are confidential. If the participants are not part of the deal, then the transaction does not appear on their ledger. The identity is found from the membership service and sends the transactions only to specific peers. Each peer triggers a result, the transaction being validated if both peers provide the same result. The peers deliver the validated transactions back to the application which forwards it to the consensus for ordering, after which the transactions are sent to the peers and stored inside the ledgers. More parties are involved inside a transaction, such as the authorities, shippers, banks, but they do not need to know the details about the deal's price.

The supply chain needs the Blockchain pattern to manage confidential transactions without forwarding everything through a central authority The deals and the transactions are stored inside the NoSQL database, CouchDB, using the JSON format. In this way queries can be done fast on a big amount of data. The Hyperledger Fabric platform uses CouchDB as a database due to its key-value storage, as well as GoLevelDB [16], which is an embedded database.