DocBridge Dashboard and Blockchain

Allen Cheng, Ethan Wuitschick, Arnaldo Barea

UNIVERSITY of SOUTH FLORIDA

Background

- Many businesses have faced a recent need to migrate more operations online, including the transmission and signing of contracts and agreements.
- OnTask.io is an online service that facilitates digital document signing, among other functionalities. DocBridge.io is an accompanying Google Chrome extension that facilitates quickstarting business workflows.

Problem

PS.1: Documents signed in the current version of OnTask are only as secure as the signatures on them. The validity of that signature needs an immutable system that can be easily checked to ensure if a document has authentic signatures on it and hasn't been altered from its original signed form.

PS.2: Administrators of these services need a way to manage the accounts that are in use and need a way to monitor the usage of the extension.

Acknowledgements

- Jeremy Ramos
- Andre Roberts
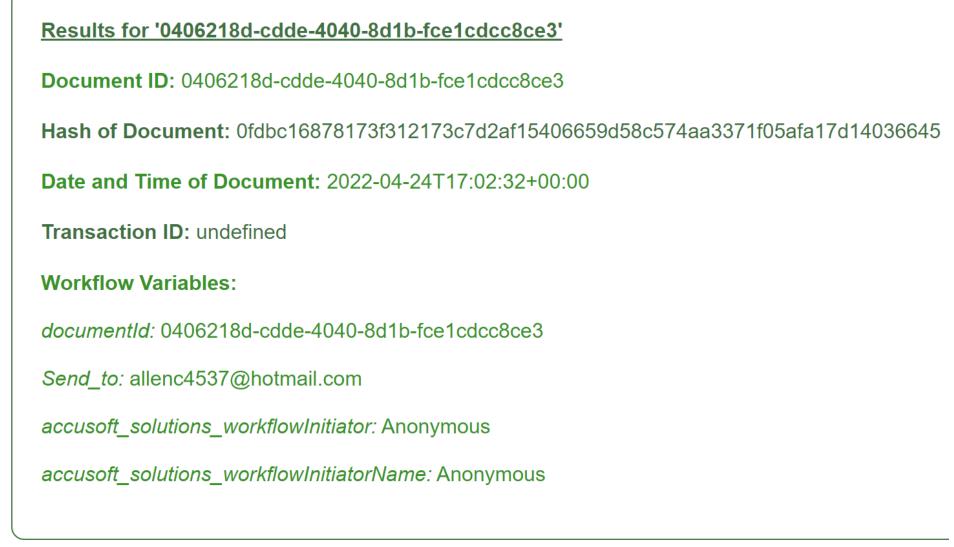- Jay DiNicola
- Dr. Kenneth Christensen

Requirements

(PS.1):
1. As a user of DocBridge.io I want to be able to tie user signatures for a document to a private blockchain so that I may know that the signature is authentic.
2. As an administrator I want a blockchain explorer so that I can search for real-time and historical information related to the transactions that are stored in the private blockchain.
3. As an administrator, I want the blockchain to be a private blockchain that restricts who holds the ledger so that documents and signatures are kept private within the system and cannot be publicly viewed.
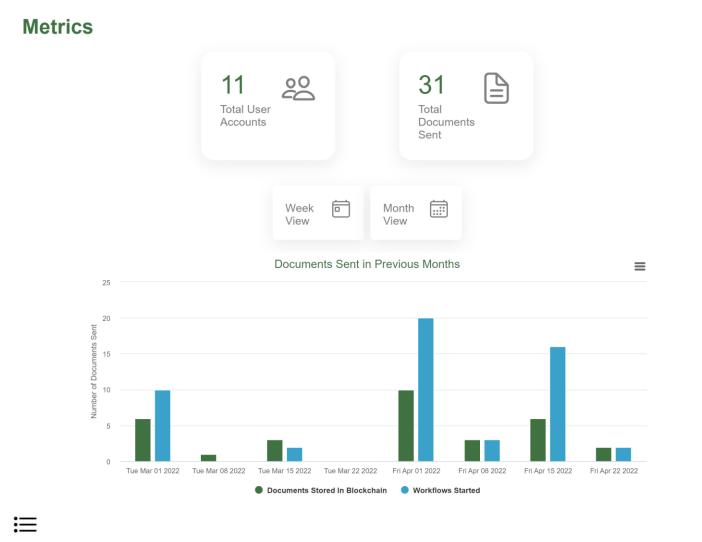
(PS.2):
1. As an administrator I want a back-end administration interface for the DocBridge.io system so that I can edit information of users that are using DocBridge.io.
2. As an administrator I want a back-end visualization interface for the DocBridge.io system so that I can visualize DocBridge metrics.
3. As an administrator I want a back-end administration interface for the DocBridge.io system so that I can view and edit information of all users of DocBridge.io.
4. As an administrator I want a back-end administration interface for the DocBridge.io system so that I can view information on previous operations.

Design

Sending a document through the DocBridge extension will log it in the blockchain. The resulting document's block is seen here:

Results for '0406218d-cdde-4040-8d1b-fce1cdcc8ce3'

Document ID: 0406218d-cdde-4040-8d1b-fce1cdcc8ce3

Hash of Document: 0fdbc16878173f312173c7d2af15406659d58c574aa3371f05afa17d14036645

Date and Time of Document: 2022-04-24T17:02:32+00:00

Transaction ID: undefined

Workflow Variables:

documentId: 0406218d-cdde-4040-8d1b-fce1cdcc8ce3

Send_to: allenc4537@hotmail.com

accusoft_solutions_workflowInitiator: Anonymous

accusoft_solutions_workflowInitiatorName: Anonymous

Metrics

Admin Management

The pages dedicated to managing admin accounts and viewing the usage metrics are shown here. Also built were pages for managing users and exploring the blockchain. Access to the non-blockchain pages is restricted with oAuth.