

(12) PATENT APPLICATION PUBLICATION

(21) Application No.202311042588 A

(19) INDIA

(22) Date of filing of Application :26/06/2023

(43) Publication Date : 21/07/2023

(54) Title of the invention : ZERO KNOWLEDGE PROOF BASED CLOUD STORAGE SYSTEM

(51) International classification :G06Q 400400, G06Q 500600, G09C 010000, H04L 093200, H04L 671097
(86) International Application No :NA
Filing Date :NA
(87) International Publication No : NA
(61) Patent of Addition to Application Number :NA
Filing Date :NA
(62) Divisional to Application Number :NA
Filing Date :NA

(71)Name of Applicant :

1)Chitkara University

Address of Applicant :Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Patiala -----

2)Bluest Mettle Solutions Private Limited

Name of Applicant : NA

Address of Applicant : NA

(72)Name of Inventor :

1)MISHRA, Rahul

Address of Applicant :ODC-4, Panchshil Tech Park, inside Courtyard by Marriott premises, Hinjewadi Phase - 1, Pune - 411057, Maharashtra, India. Pune -----

2)PANDEY, Sakshi

Address of Applicant :ODC-4, Panchshil Tech Park, inside Courtyard by Marriott premises, Hinjewadi Phase - 1, Pune - 411057, Maharashtra, India. Pune -----

3)MANTRI, Archana

Address of Applicant :Chitkara University, Chandigarh-Patiala National Highway, Village Jhansla, Rajpura, Punjab - 140401, India. Patiala -----

(57) Abstract :

The present disclosure generally relates to the system (100) of implementing zero-knowledge proofs to create a secure cloud storage system. By integrating ZKPs, users can verify the integrity of their stored data, ensuring it remains unaltered and protected from unauthorized modifications. The system (100) explores the advantages of utilizing zero-knowledge proofs, including enhanced data privacy, verifiability, and minimized trust in the cloud provider. The implementation leverages cryptographic techniques, key management, and secure communication protocols to ensure the confidentiality, integrity, and authenticity of data. The secure cloud storage system (100) offers compatibility with existing infrastructure, scalability, and efficiency, providing users with a robust and privacy-preserving solution that complies with data protection regulations. Through the implementation of zero-knowledge proofs, the secure cloud storage server (106) empowers users with increased control over their data while leveraging the benefits of cloud network (104), establishing a new paradigm for secure data storage and management.

No. of Pages : 25 No. of Claims : 7