पेटेंट कार्यालय
शासकीय जर्नल

OFFICIAL JOURNAL
OF
THE PATENT OFFICE

निर्गमन सं. 32/2026	शुक्रवार	दिनांक: 07/08/2026
ISSUE NO. 32/2026	FRIDAY	DATE: 07/08/2026

पेटेंट कार्यालय का एक प्रकाशन
PUBLICATION OF THE PATENT OFFICE

(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :04/08/2026

(21) Application No.202641094114 A

(43) Publication Date : 07/08/2026

(54) Title of the invention : PRIVACY-PRESERVING FEDERATED CLOUD SECURITY FRAMEWORK USING HOMOMORPHIC ENCRYPTION AND SECURE KEY MANAGEMENT

(51) International classification	:H04L 9/00, G06F 21/60, H04L 9/08, H04L 9/32, G06F 21/62
(31) Priority Document No	:NA
(32) Priority Date	:NA
(33) Name of priority country	:NA
(86) International Application No Filing Date	: :01/01/1900
(87) International Publication No	: NA
(61) Patent of Addition to Application Number Filing Date	:NA :NA
(62) Divisional to Application Number Filing Date	:NA :NA

(71)**Name of Applicant :**
1)Mr. Nikhilesh Katakam
Address of Applicant :Master of Science –Northern Arizona University, Door No:2-5-393, Udyoga Nagar 3rd Line, Guntur, Andhra Pradesh, 522002, India. Andhra Pradesh India
2)Mr. Ananda Babu Rudrubati
3)Mrs. P Radharani
4)Dr. T. Anuradha
5)Dr. Chittineni Suneetha
6)Dr. Ganji Ramanjaiah
7)Dr. M.V.P. Chandra Sekhara Rao
8)Mr. Rallabandi Ch S N P Sairam
9)Dr. Katakam Venkateswara Rao
(72)**Name of Inventor :**
1)Mr. Nikhilesh Katakam
2)Mr. Ananda Babu Rudrubati
3)Mrs. P Radharani
4)Dr. T. Anuradha
5)Dr. Chittineni Suneetha
6)Dr. Ganji Ramanjaiah
7)Dr. M.V.P. Chandra Sekhara Rao
8)Mr. Rallabandi Ch S N P Sairam
9)Dr. Katakam Venkateswara Rao

(57) Abstract :
The present invention relates to the development of a privacy-preserving federated cloud security framework based on homomorphic encryption and secure key management for improving data privacy and integrity in cloud computing. The framework allows various cloud service providers to perform computations on the encrypted data without revealing any confidential data. The homomorphic encryption allows computations on encrypted data sets and reduces the risk of data leakage. In addition, the secure key management system provides the guarantee of proper management of cryptographic keys and prevents unauthorized access to keys and secure data exchange between federated clouds. The presented framework tackles important issues related to federated cloud security such as trust, scalability and compliance with privacy regulations. Experimental results prove the efficiency of the proposed framework. FIG.1

No. of Pages : 10 No. of Claims : 5