A Survey on Forensic Evidence Management under AWS-S3 Service

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Abstract*: Evidence management is crucial in the field of forensic science. Evidence obtained from a crime scene is important in solving the case and delivering justice to the victim involved. Hence, protecting the integrity of the evidence throughout the process is of prime importance. Chain of Custody (CoC) is the process which maintains the integrity of the evidence using Blockchain Technology. Inability to maintain the chain of custody will make the evidence inadmissible in court, eventually leading to the case dismissal. Digitalization of forensic evidence management system is a need of time as it is an environment friendly model. Blockchain are digitally distributed ledgers of transactions signed cryptographically in chronological order that are sorted into blocks and is completely open to anyone in the blockchain network. Present study aims to create a framework and further propose an algorithm to implement blockchain technology to digitalize forensic evidence management system and maintain Chain of Custody.*

Keywords: Forensic Evidence Management, Blockchain, Chain of Custody, AWS-S3, Security.

REFERENCES

[1]. Alenezi, Ahmed MohanRaj, "Digital and Cloud Forensic Challenges." ArXiv abs/2305.03059 (2023).

[2]. Vadetay Saraswathi Bai, T. Sudha. (2023). "A Systematic Literature Review on Cloud Forensics in Cloud Environment", International Journal of Intelligent Systems and Applications in Engineering (IJISAE), 11(4s), 565–578.

[3]. Achar Sandesh (2022). "Cloud Computing Forensics", International Journal Of Computer Engineering &Technology (IJECT).13.1-10.10.17605/OSF.IO/9N64K.

[4]. R. Sathyaprakasan, P. Govindan, S. Alvi, L. Sadath, S. Philip and N. Singh, "An Implementation of Blockchain Technology in Forensic Evidence Management", 2021 International Conference on Computational Intelligence and Knowledge Economy (ICCIKE),Dubai, United Arab Emirates, 2021, pp. 208-212.

[5]. S. Patil, S. Kadam and J. Katti, "Security Enhancement of Forensic Evidences Using Blockchain," 2021 Third International Conference on Intelligent Communication Technologies and Virtual Mobile Networks (ICICV), Tirunelveli, India, 2021, pp. 263-26.

[6]. Mamta Khanchandani , Dr. Nirali Dave(2021), " Analysis of Cloud Forensics : Review and Impact on Digital Forensics Aspects" International Journal of Scientific Research in Science and Technology(IJSRT).

[7]. P. S. Murthy and V. Nagalakshmi, "Database Forensics and Security Measures to Defend from Cyber Threats," 2020 3rd International Conference on Intelligent Sustainable Systems (ICISS), Thoothukudi, India, 2020, pp. 1302-1307.

[8]. S. De, M. S. Barik and I. Banerjee, "A Digital Forensic Process Model for Cloud Computing," 2020 IEEE Calcutta Conference(CALCON),Kolkata,India,2020,pp.106-110.

[9]. M. Chopade, S. Khan, U. Shaikh and R. Pawar, "Digital Forensics: Maintaining Chain of Custody Using Blockchain," 2019 Third International conference on I-SMAC (IoT in Social, Mobile, Analytics and Cloud) (I-SMAC), Palladam, India, 2019, pp. 744-747.

[10]. K. Rani and C. Sharma, "Tampering Detection of Distributed Databases using Blockchain Technology," 2019 Twelfth International Conference on Contemporary Computing (IC3), Noida, India, 2019, pp. 1-4.

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