A Blockchain-based Security Assessment Framework

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Abstract—**Using Blockchain Technology for Security Assessment results in effective monitoring capabilities especially when data analytics components are inbuilt in such a system. At present days, we can see the availability of many Security Information and Event Management (SIEM) tools that follow a client-server model for capturing data from different resources and performing data analysis on the server side. However, such tools serve the purpose of a single institute and depend on the trust level in a multi-institute or multi-center-project kind of environment where they can be used. Another limitation could be if the server itself is attacked then the whole exercise would be futile. The lack of trust and concerns about data integrity in such an environment makes performing root cause analysis of security risks difficult. Blockchain technology ensures a tamper-proof, time-stamped, and decentralized storage repository that helps in maintaining data integrity even in complex and untrusted multi-institute or multi-center-project environments while assuring data provenance. This article[1] presents a unified and comprehensive security assessment framework that produces a compliance report along with threat perception level by monitoring and assessing resources across multi-institute or multi-center-project in different geographical locations while supporting data privacy by leveraging Blockchain Technology capabilities.**

Keyword—***Blockchain, Security Assurance Policy, Continuous Monitoring***

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