Title: Identification and Authentication Failures: Foundational Aspects of Strong Detection Mechanisms

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Abstract: Online platforms, such as e-commerce and online apps, have become crucial in daily activities, providing increased efficiency and easier access to goods and services. Due to its availability, user-friendly interfaces, and convenience, it saves time and effort by allowing users to execute work at any time and from any location, removing geographical obstacles and simplifying daily routines. It is a platform where sensitive data such as user identities and login credentials are stored, attracting violators to carry out the attacks. Attackers can gain access to sensitive data through different types of Identification and Authentication Failures attacks. In this research, we scanned Scopus Indexed works released within the last 13 years (between 2012 and 2025) using two keywords: “Identification Failure” and “Authentication Failure.” 10 of the 27 publications chosen for review described various detection approaches for Identification and Authentication Failures attacks. These approaches include hierarchical authentication systems, biometric authentication systems, blockchain and IoT-based approaches, the EPICS framework, and the Vibration-And-Pattern (VAP) method. The objective of this research is to identify performance gaps, emphasize unresolved vulnerabilities, and discuss forthcoming opportunities to improve the safety and efficiency of identification and authentication processes. The study also examined the strengths and weaknesses, as well as the authentication components and efficiency of the identification and authentication methods. Therefore, this research will be beneficial in influencing the emergence of approaches for detecting Identification and Authentication Failures.

Key words: host mismatch , identification and authentication failures , improper authentication , session fixation,vulnerability detection

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