

ABSTRACT

SECURITY ANALYSIS OF THE ABC LOCAL GOVERNMENT WEBSITE USING THE PENETRATION TESTING EXECUTION STANDARD (PTES) METHOD

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The official website of the ABC Local Government is used to deliver public information and receive community complaints, including personal data such as names, emails, and phone numbers. However, the website had previously experienced an attack that altered its appearance, which is suspected to have been an XSS attack. This indicates a security vulnerability in a system that should protect user data. In addition, the website does not yet have an optimal security system, despite storing sensitive information and operating in a public digital environment. This situation reveals a gap between the need for information system protection and the actual security measures implemented, making a thorough security analysis necessary. This study aims to analyze the security of the ABC Local Government website using the Penetration Testing Execution Standard (PTES) method. Testing was conducted through seven stages: Pre-engagement Interactions, Intelligence Gathering, Threat Modeling, Vulnerability Analysis, Exploitation, Post-exploitation, and Reporting. The study successfully identified several critical vulnerabilities such as XSS, SQL Injection, and clickjacking, and demonstrated that some attacks could be executed with real impact. Meanwhile, the DDoS test was unsuccessful, indicating the server's resilience against such attacks. The main contribution of this research is to provide technical recommendations for vulnerability mitigation and to raise awareness of the importance of standardized security testing. The results are expected to serve as a reference for government institutions in maintaining the quality and security of web-based services.

Keywords: Cyber Security, Penetration Testing Execution Standard (PTES), Websites, Security Systems, Local Government.