ABSTRACT

The rapid development of technology is aligned with the development of web-based applications and it also increases security attacks and various threat techniques that attack the web. The integrated service office at the XYZ local government has used the website to help one of its business processes. That way, a vulnerability assessment, and penetration testing are needed to find out the security gaps on the website in a government institution. Vulnerability Assessment is a method to search for existing security vulnerabilities on a website and penetration testing is a method to test security vulnerabilities on a website. In this study, vulnerability assessment and penetration testing will be carried out on the integrated service site at the XYZ regional government using the PTES standard with several tools used, namely OWASP ZAP, Acunetix, and Paros on Kali Linux. The vulnerability assessment results obtained on the integrated service website have different types of vulnerabilities and levels of risk according to the tools used. In the tests carried out on the OWASP ZAP tool, the vulnerability with a high-risk level of 10% was obtained. The Acunetix tool got a vulnerability with a high-risk level of 16.6%, and the Paros tool got a vulnerability with a high-risk level of 20%.

Keywords— Vulnerability, Vulnerability Assessment, Penetration Testing, PTES.