

ABSTRAK

Transformasi digital dalam pengelolaan arsip telah membawa kemudahan dalam akses dan efisiensi informasi, namun juga menimbulkan tantangan serius dalam hal keamanan data. Penelitian ini bertujuan untuk mengimplementasikan sistem manajemen keamanan arsip digital menggunakan layanan *Identity and Access Management* (IAM) dari *Amazon Web Services* (AWS) dengan fokus pada penerapan *Multi-Factor Authentication* (MFA). Melalui metode pengembangan sistem waterfall, tahapan implementasi dimulai dari analisis kebutuhan, desain sistem, hingga pengujian autentikasi dua faktor berbasis *One-Time Password* (OTP). Hasil penelitian menunjukkan bahwa integrasi IAM dan MFA mampu meningkatkan perlindungan arsip digital dari akses tidak sah, dengan respon autentikasi yang cepat dan mekanisme verifikasi yang efisien. Pengujian sistem menunjukkan keberhasilan *login* hanya dapat dilakukan apabila kedua faktor autentikasi terpenuhi, sehingga prinsip kerahasiaan, integritas, dan ketersediaan informasi dapat dijaga. Penelitian ini memberikan kontribusi dalam perancangan sistem keamanan arsip digital berbasis *cloud* yang aman, terstruktur, dan sesuai dengan standar keamanan informasi modern.

Kata Kunci: *Arsip Digital, IAM, AWS, Multi-Factor Authentication, Keamanan Informasi, OTP.*

ABSTRACT

Digital transformation in archive management has brought ease of access and efficiency of information, but it also poses serious challenges in terms of data security. This research aims to implement a digital archive security management system using Identity and Access Management (IAM) services from Amazon Web Services (AWS) with a focus on implementing Multi-Factor Authentication (MFA). Through the waterfall system development method, the implementation stages start from requirements analysis, system design, to One-Time Password (OTP) based two-factor authentication testing. The results show that the integration of IAM and MFA can improve the protection of digital archives from unauthorized access, with a fast authentication response and an efficient verification mechanism. System testing shows that successful login can only be done if both authentication factors are met, so that the principles of confidentiality, integrity, and availability of information can be maintained. This research contributes to the design of a cloud-based digital archive security system that is secure, structured, and in accordance with modern information security standards.

Keywords: Digital Archive, IAM, AWS, Multi-Factor Authentication, Information Security, OTP.

