

# **Securing APIs: Strategies, Standards, and Best Practices**

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**Abstract:** *Application Programming Interfaces (APIs) are the backbone of modern digital ecosystems, enabling seamless data exchange and functionality sharing between applications. However, as their use grows, so do the security threats targeting them. This paper reviews the major challenges in API security, common attack vectors, and industry best practices to mitigate vulnerabilities. The paper also explores emerging trends such as Zero Trust architecture, API gateways, and automated security testing for APIs.*

**Keywords:** API Security, Authentication, Authorization, OAuth 2.0, JSON Web Token (JWT), API Gateway, Data Protection, Zero Trust Architecture, Rate Limiting, Cybersecurity, Web Application Firewall (WAF), Secure API Design

