

Design Of Role Based Access Control for a Serverless Environment

By

Akinade, Abigail Oluwatoyin¹; Adeniyi, Akanni²; Udemba, Chukwudi Anthony³; Oyinlola, Ganiyah Adesola⁴

^{1,2,3,4}Department of Computer Science, Caleb University, Imota, Nigeria.

Contact email: akinade.abigail@calebuniversity.edu.ng

ABSTRACT

Serverless computing has been making waves for the past few years due to its cost-effectiveness. With serverless computing, which offers autonomous scale and cost effectiveness, developers may create and execute applications without having to maintain or provision servers. However, its special characteristics also provide significant security challenges. This study's objective is to design a simple Role Based Access Control (RBAC) in relation to serverless computing for a stronger authentication procedure. RBAC is a method of restricting network access based on the assigned tasks of individual users within a group. It could be challenging and complex to implement RBAC in serverless systems, necessitating the seamless integration of serverless deployment techniques and frameworks with fine-grained access control, and dynamic scaling. Thus, a flowchart that is easy to navigate is proposed to aid implementation. It is recommended for enterprises willing to embark on serverless computing due to its clarity easy adaptation to any programming language.

Keywords: *Serverless computing, RBAC, security mechanisms, authentication, privacy*