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SERVERLESS COMPUTING FOR SCALABLE SAP APPLICATIONS

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ABSTRACT

Serverless computing has emerged as a transformative paradigm in cloud computing, providing an efficient and cost-effective way to run applications without the need to manage the underlying infrastructure. This is particularly beneficial for enterprises utilizing SAP applications, which often face scalability challenges due to fluctuating workloads. Serverless computing, by abstracting the infrastructure management, enables dynamic scaling based on demand, allowing SAP applications to handle high-traffic events seamlessly. This approach eliminates the need for organizations to pre-provision resources, thereby reducing operational overhead and associated costs.

In the context of SAP applications, serverless computing offers significant advantages. These include automatic scaling, efficient resource utilization, and reduced time-to-market for new features and updates. Additionally, serverless environments facilitate faster development cycles by simplifying backend management, allowing SAP systems to focus more on business logic rather than infrastructure concerns. Furthermore, with serverless models, companies can better optimize their IT budgets by only paying for actual usage rather than over-provisioning resources.

This paper explores the benefits and challenges of implementing serverless computing in scalable SAP environments, providing insights into architectural considerations, integration strategies, and potential performance impacts. It also discusses real-world use cases and the potential future of serverless computing in the enterprise application landscape. By analyzing key factors such as flexibility, cost efficiency, and performance, this research aims to offer a comprehensive understanding of the potential of serverless architectures in modernizing SAP applications for scalable, cloud-based operations.

KEYWORDS: *Serverless Computing, SAP Applications, Scalability, Cloud Computing, Infrastructure Management, Automatic Scaling, Resource Utilization, IT Budget Optimization, Enterprise Applications, Cloud-Based Operations, Backend Management, Integration Strategies, Performance Optimization, Cost Efficiency, Flexible Architecture*

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