MICROSERVICES TRANSITION BEST PRACTICES FOR BREAKING DOWN MONOLITHIC ARCHITECTURES

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ABSTRACT

The transition from monolithic architectures to microservices is a significant trend in software development that enhances scalability, flexibility, and maintainability. This abstract explores best practices for effectively breaking down monolithic systems into microservices, focusing on the challenges and methodologies involved. As organizations aim to adopt agile practices and improve deployment frequencies, microservices offer a solution by enabling teams to develop, test, and deploy services independently. The paper highlights key strategies such as domain-driven design, API-first development, and containerization, emphasizing the importance of robust communication between microservices. Additionally, it addresses potential pitfalls during the transition, including data management, service orchestration, and operational complexity. By examining real-world case studies and expert recommendations, this research aims to provide a comprehensive framework for organizations embarking on their microservices journey, ensuring a smoother transition and optimal performance of the resulting architecture.

KEYWORDS: *Microservices, Monolithic Architecture, Software Development, Scalability, Agility, Containerization, API-First Development, Domain-Driven Design*