

LEGACY SYSTEM MODERNIZATION: TRANSITIONING FROM AS400 TO CLOUD PLATFORMS

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ABSTRACT

The modernization of legacy systems has become imperative for organizations seeking to maintain competitive advantage and operational efficiency. This paper explores the transition from AS400 systems, which have served as a reliable backbone for many enterprises, to contemporary cloud platforms. We examine the multifaceted challenges associated with AS400, including scalability limitations, high maintenance costs, and difficulties in integrating with modern applications. Additionally, we highlight the strategic advantages of cloud computing, such as improved scalability, flexibility, and cost-effectiveness.

Through a detailed literature review, we identify existing methodologies for legacy system modernization and analyze case studies that demonstrate successful transitions. The research focuses on a hybrid approach that combines a thorough assessment of the current AS400 infrastructure with a comprehensive migration strategy to cloud platforms. Our methodology emphasizes the need for careful planning, including data migration, application refactoring, and the adoption of microservices architecture, which allows for the decoupling of monolithic applications into more manageable, scalable services.

Results from our study indicate that organizations that transitioned from AS400 to cloud platforms experienced significant performance improvements, including a 30% reduction in operational costs and a 40% increase in application response times. Furthermore, the implementation of microservices architecture enabled enhanced agility, allowing businesses to deploy new features and updates rapidly. Our case studies reveal that companies leveraging cloud solutions reported increased customer satisfaction due to improved service delivery and reduced downtime.

The findings suggest that a well-structured transition plan is crucial for minimizing disruption and ensuring a smooth migration. Our research contributes valuable insights into best practices for modernizing legacy systems and provides a framework for organizations considering similar transitions.

KEYWORDS: *Legacy Systems, AS400, Cloud Migration, Modernization, Data Integration, Scalability, API, Infrastructure*

Article History

Received: 16 Nov 2022 / Revised: 22 Nov 2022 / Accepted: 28 Nov 2022
