

CLOUD MIGRATION AND MODERNIZATION OF LEGACY ENTERPRISE SYSTEMS: A CASE STUDY

Aneeshkumar Perukilakattunirappel Sundareswaran¹ & Shantanu Bindewari²

¹Cochin University of Science and Technology, Cochin, Kerala, India

²IILM University, Greater Noida, India

ABSTRACT

The migration and modernization of legacy enterprise systems to the cloud is a critical step for organizations striving to maintain competitiveness in an increasingly digital marketplace. Legacy systems, often built with outdated technologies, are not well-suited for the modern demands of scalability, agility, and cost-efficiency. Cloud migration offers the opportunity to overcome these challenges by leveraging the flexibility and performance of cloud computing environments. This case study investigates the process of migrating a legacy enterprise system to the cloud and modernizing its components to enhance performance, reduce operational costs, and improve overall business agility.

The study covers the entire migration journey, including initial assessment, architecture redesign, data migration, integration with existing systems, and post-migration testing. It also explores the key challenges faced during the transition, such as data consistency, security concerns, and training requirements for staff. The case study highlights the benefits of cloud adoption, including improved system reliability, faster time-to-market for new features, and enhanced scalability to meet changing business needs. It further demonstrates how cloud-native technologies, such as microservices and containerization, enable greater flexibility and efficiency in modernizing legacy systems.

Through this case study, organizations can gain insights into best practices for cloud migration, the importance of a strategic approach, and the long-term advantages of adopting a cloud-first strategy for enterprise system modernization. This research aims to provide valuable guidance for businesses considering similar migrations and modernization initiatives in the evolving landscape of cloud technology.

KEYWORDS: *Cloud migration, legacy systems, enterprise modernization, cloud computing, scalability, agility, system integration, data migration, microservices, containerization, cloud-native technologies, digital transformation, operational efficiency, business agility, IT modernization.*

Article History

Received: 17 Jan 2025 | Revised: 24 Jan 2025 | Accepted: 31 Jan 2025
