

Enhancing System Performance with Observability Data Analytics and Cost Savings

Vamsidhar Nimma¹ and Sandeep Guthikonda²

Vice President, JP Morgan Chase, Columbus OH USA^{1,2}

nimmavr@gmail.com and skg.br0820@gmail.com

Abstract: *Modern applications are increasingly complex, built using microservices architectures, spread across cloud environments, and deployed globally. Maintaining system performance, reliability, and security is no easy task. Observability, powered by data analytics, helps engineers monitor, understand, and optimize these systems efficiently. Beyond operational benefits, observability leads to significant cost savings by reducing downtime, optimizing infrastructure, and improving development cycles. This article dives into how observability transforms system performance and how it results in real-world savings for businesses.*

Keywords: Observability, Data Analytics, Microservices, Cloud Systems, Performance Optimization, Cost Savings, Machine Learning