

## **ABSTRACT**

The provision of cloud computing services has become a promising business due to the increasing need for data digitization. However, the implementation of cloud computing services often leads to various technical issues experienced by customers. While customer complaints are already recorded digitally, they are managed using a monolithic-based ticketing platform that has limited features and suboptimal performance. In this capstone project, we will design a helpdesk ticketing application with features for complaint management and issue tracking experienced by clients. Additionally, we will incorporate additional features that facilitate the company in monitoring the performance of engineers in providing services to customers. To address these issues, our solution will utilize a ticketing application approach based on microservices, which offers better performance compared to the previous system. The purpose of this study is to prove that the performance of microservice based ticketing application is superior to monolithic based ticketing application. The results show that the microservices based ticketing application excels in success rate, response time, CPU usage, and RAM usage.

Keywords: Monolith, Microservice, Cloud Computing, Ticketing System, Performance