Analysis of Application Performance

Before and After Implementing Caching Memory

In Logistics Applications

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ABSTRACT

The importance of an application to manage logistics operations is crucial for

supporting the operational workflow of an organization. The main problem faced

by the application is the increasingly slow data processing due to the growing

amount of data. This study aims to find a solution to this issue by analyzing the

performance comparison of the logistics application before and after implementing

caching memory using Redis. Redis, an in-memory NoSQL database, was applied

to speed up data processing. Testing was conducted using Grafana K6 and

Postman. The results showed that after the implementation of Redis, the

performance of response times for almost all endpoints improved, with a significant

increase in response speed for the Draft/Resi endpoint, showing a time difference

of 4.49 seconds. In conclusion, Redis successfully enhanced the performance of this

logistics application significantly.

Keywords: Cache Memory, Redis, Grafana K6, Postman, Laravel

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