



Client Overview

- The client is a holding conglomerate headquartered in Singapore with a focus on Digital microfinance for individuals and small businesses.



Application Overview

- Application enhancement to overcome performance and user experience issues, and process the loan within 30 minutes.



Business Challenges

- The existing application was heavily Dockerized increasing the complexity and infra requirements
- Existing codebase was not supported in AWS
- Performance constraints created a system lag, while processing loans



Our Solutions

- Migration of the data from Digital ocean to AWS.
- Code enhancement to use a maximum of the existing code, with minor modifications, in the new platform.
- Efficient Dockerization using AWS components, which reduced number of servers minimizing the TCO.
- Tuning of the application for high availability, with Queue and Task manager.
- Integration with third-party APIs for a faster loan approval



Tools

- 🔗 **Python (Django framework)** – codebase
- 🔗 **Elasticsearch** – data indexing
- 🔗 **PostgreSQL (AWS RDS)** – database
- 🔗 **Digital Ocean, AWS** – cloud provider
- 🔗 **Celery** - Distributed Task Queue



Business Impact

- 🔗 **Highly available System:** Application enhanced with high-durability system that elevated the performance by nearly 89%.
- 🔗 **Performance:** 93% reduction in time taken to generate financial reports and process loans. Loan processing within 30 mins was achieved.
- 🔗 **Process Automation:** 80%+ drop in transaction issues while integrating with banks for the automated loan repayment processes. Improved the existing system with new features, like automated email triggers to customers etc.



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