

## CASE STUDY: PERFORMANCE TUNING



# PERFORMANCE TESTING AND TUNING OF CLOUD NATIVE APPLICATIONS

## ABOUT THE CUSTOMER

The client, who is a leading company in the mortgage industry, initiated a modernization project. The new software platform is expected to process multi-trillion dollars of assets and multi-billion dollars of cash flow. The Capitis team played a key role in developing, performance testing, and tuning cloud native applications on AWS.



## THE CHALLENGE

- Cloud native application performance testing and tuning bring additional challenges to the development lifecycle other than those encountered in a traditional data center. These challenges include:
  - Selection of the optimum compute and storage resources for application services, messaging, and database layer
  - Balancing the number of reserve versus on-demand EC2 instances
  - Streamlining batch workloads to maximize throughput while optimizing AWS resource requirements
  - Identifying optimum scale-in and scale-out policies
  - Identifying the optimum backup and archiving policies

## THE SOLUTION

- We implemented a cloud native test framework that could connect and load elastically scalable microservices application platforms. Our custom test framework itself was developed as a set of microservices that was deployed and configured using automated CI/CD pipeline. The traditional monolithic load generation tools proved to be too slow to configure and adapt to the constantly evolving microservices platform.
- We performed a value analysis with different types of infrastructure components and under different load conditions, which enabled us to select the optimum AWS resources while taking business impacts into consideration
- Relational databases tuning effort included optimization of AWS compute, storage, and IOPS resources

## THE BENEFITS

- By leveraging AWS and our Capitis Test Framework, we overcame the challenge of scaling the platform while optimizing AWS resource costs. Our innovative, cloud-native test framework accelerated platform performance tuning in a cost-effective manner.
- We recommended the best AWS compute, storage, and network resources that met performance requirements while satisfying budget constraints.

## CAPITIS SOLUTIONS AND AWS

- We are playing a key role in developing backend computation platform for the mortgage industry which is expected to handle multibillion dollars of assets and cash flows

## NEXT STEPS

- To learn more about how AWS and Capitis Solutions can help your business, visit [www.capitissolutios.com](http://www.capitissolutios.com)