

# Enabling 300K Concurrent User load for an e-Commerce Company

Our Customer, an India based e-commerce company was beginning to face application performance issues as their sales picked up, resulting in dissatisfied customers.



An e-Commerce solution was needed that was scalable and performance testing to ensure seamless delivery during demand spurts.

## Challenges

- The customer had significant performance issues with 50,000 concurrent users whilst on a private cloud
- More than 300,000 ramp up expected during the sales of much sought-after product
- Application go-live postponed multiple times due to scalability issues

## Solution

**Consulting:** Stanra conducted a survey on the Application code (.NET and C#) assessment and refactoring of .NET code and DB layer

**Cloud Advisory:** Cloud infrastructure design and migration from on-premise to AWS

**Application Performance Reengineering:** Microservices implementation

### Performance Testing:

- Performance test bed creation on AWS using 12 EC2 servers
- Load test scripts using Locust
- Executed load tests in increments to scale the application to 300k concurrent users.
- Modified code and EC2 and RDS configurations, DB layer changes
- Conducted Endurance test to confirm the reliability of the application

**DevOps:** Automation code build and deploy on AWS

## Innovation

- Application performance testing and re-engineering hold the key to scalability
- The test bed/test environment on the cloud gave clarity on the actual behaviour of the application.

## Benefits

- Stanra team redesign application, designed infrastructure on AWS and certified the application for 300k concurrent users. Application went live and managed the peak load
- On-time Project go-live
- Scalability for future product launches
- Created an on-demand, scalable cloud-based IT infrastructure

## Result Highlights

500% Jump in Load Handling Capacity

100% DevOps Automation

Scalable for Future Products