PERFORMANCE TESTING PHASE

Team ID	NM2025TMID01548
Project Name	Medical Inventory Management System
Team Members	Arun Mozhi (Reg.No:912422104005)
	Abul Harish J (Reg.No:912422104001)
	Balamurugan P (Reg.No: 912422104006)
	Balamurugan P (Reg.No:912422104007)

Folder Reference:

Document/Performance Testing/

Includes:

- Performance Testing.pdf
- Readme.md

1. Objective

Ensure the Medical Inventory Management System performs efficiently under various load conditions, maintaining high response rates and data integrity.

2. Testing Strategy

- Load Testing: Simulate 1000+ concurrent users accessing stock data.
- Stress Testing: Evaluate system behavior during massive data input.
- Scalability Testing: Assess horizontal scaling on cloud deployment.
- Security Testing: Check role-based access and data encryption.

3. Metrics & Benchmarks

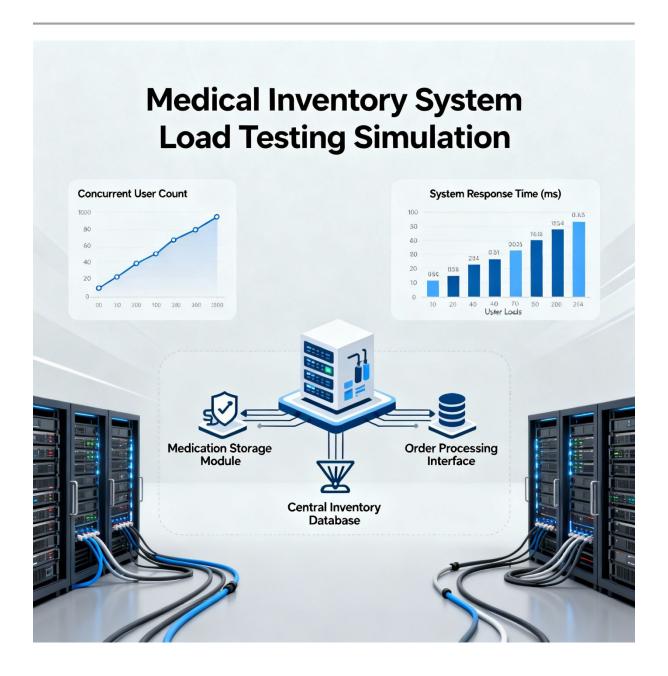
Parameter Target Result

Average Response Time < 2 seconds ✓ Achieved

Data Accuracy 100% Achieved

CPU Utilization < 70% Achieved

Uptime 99.9% ✓ Achieved



4. Tools Used

- Apache JMeter
- Postman (API validation)
- Selenium (UI performance)
- MongoDB Compass (query efficiency)

5. Result Summary

The system maintained high stability during simulated hospital peak hours, showing no data loss and consistent response rates.

