

# PERFORMANCE TESTING PHASE

Team ID	NM2025TMID01548
Project Name	Medical Inventory Management System
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**Folder Reference:**

Document/Performance Testing/

Includes:

- Performance Testing.pdf
- Readme.md

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## 1. Objective

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

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## 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.
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### 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)
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## 5. Result Summary

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

