

PERFORMANCE TESTING PHASE

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Project Name	Medical Inventory Management System
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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.
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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)

5. Result Summary

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

