

# InterviewAI Login API Load Test Report

## Test Overview

This report documents the load testing performed on the InterviewAI Login API (<https://api.interviewai.tech>) using Apache JMeter to evaluate system behavior under high concurrent user load.

## Test Configuration

- Tool: Apache JMeter 5.6.3
- Target API: POST /api/login
- Concurrent Users: 500
- Protocol: HTTPS
- Backend: Node.js + Express + MongoDB (Mongoose)
- Deployment: Azure VM

## Performance Metrics

Metric	Value	Observation
Total Requests	500	All requests executed
Average Response Time	6359 ms	High latency under load
Minimum Response Time	539 ms	Fastest successful request
Maximum Response Time	9149 ms	Severe delay for peak load
Error Rate	0.00 %	No failed requests
Throughput	11.2 requests/sec	Moderate throughput
Std Deviation	2213 ms	High response variability

## Analysis & Findings

The system handled 500 concurrent login requests without errors, demonstrating improved stability after backend optimizations. However, the high average and maximum response times indicate CPU-intensive authentication operations, such as password hashing and token generation, under peak load.

## Conclusion

The InterviewAI backend is stable and secure under high concurrent login traffic, with zero request failures. For further improvement, horizontal scaling, additional PM2 workers, or asynchronous authentication optimizations are recommended.