

Performance Test Report — HairTherapy Backend (Task #13)

Test Setup

- Number of Threads (Users): **1000**
- Ramp-up Time: **300 seconds**
- Loop Count: **1**
- Endpoint Tested: **POST /api/users/addUser**
- Content-Type: **application/json**
- Request Body (static user):

```
{  
  "name": "LoadTestUser",  
  "email": "loadtest@example.com",  
  "password": "123456",  
  "role": "CLIENT"  
}
```

Summary of Results (From JMeter)

Metric	Result
Total Samples	1654
Average Response Time	18,160 ms (18 seconds)
Minimum Response Time	0 ms
Maximum Response Time	30,046 ms
Standard Deviation	14,660 ms
Error Percentage	99.76%
Throughput	2.5 requests/sec

Received KB/sec	30.82
Sent KB/sec	0.69
Average Bytes	124,245 bytes

What These Results Mean

- The server became **extremely slow** under load.
- Average response time reached **18 seconds**.
- **Almost all requests failed** (99.76% error rate).
- Throughput was very low (2.5/sec), meaning the backend processed very few requests.
- The backend could not handle 1000 concurrent users.
- The high standard deviation (14 seconds) shows inconsistent performance.

Conclusion

Based on the performance test:

- The system **does not meet the performance requirements**.
- Under heavy load (1000 users), the backend:
 - Showed **very slow response times**
 - Had **very high failure rates**
 - Could not maintain stable throughput
- The application requires **significant optimization** before supporting high traffic.

Screenshots of the results:





