

k6 Load Testing Results - Performance Report:

```
C:\Users\Lenovo\Desktop\Final Project - HTU\k6>k6 run FileName.js
  Grafana
  execution: local
    script: FileName.js
    output: -
  scenarios: (100.00%) 2 scenarios, 23 max VUs, 2m50s max duration (incl. graceful stop):
    * smoke: 5 looping VUs for 30s (gracefulStop: 10s)
    * load: 23 looping VUs for 2m0s (startTime: 40s, gracefulStop: 10s)

  ■ THRESHOLDS
  checks
    ✓ 'rate>0.94' rate=100.00%
  http_req_duration
    ✓ 'p(95)<1000' p(95)=264.07ms
  http_req_failed
    ✓ 'rate<0.2' rate=0.00%
```

Total Checks:

- Total checks executed: 6688
- Passed: 6688 (100%)
- Failed: 0

All functional validations succeeded:

- Status code is 200
- Users array is not empty
- First user has ID
- Response time is acceptable

HTTP Performance:

Response Time Statistics

Metric	Value
Average	172.47 ms
Median	161.19 ms
Minimum	148.47 ms
Maximum	606.35 ms
p90	181.6 ms
p95	264.07 ms

95% of all requests completed in under 264.07 ms.

Requests Summary:

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- Total HTTP requests: 2608
- Failed requests: 0
- Request rate: ~15.34 requests/second

Execution Summary:

- Total iterations: 836
- Average iteration duration: 3.53 seconds
- Maximum iteration duration: 3.97 seconds
- Maximum VUs: 23

Network Usage:

- Data received: 32 MB
- Data sent: 331 KB

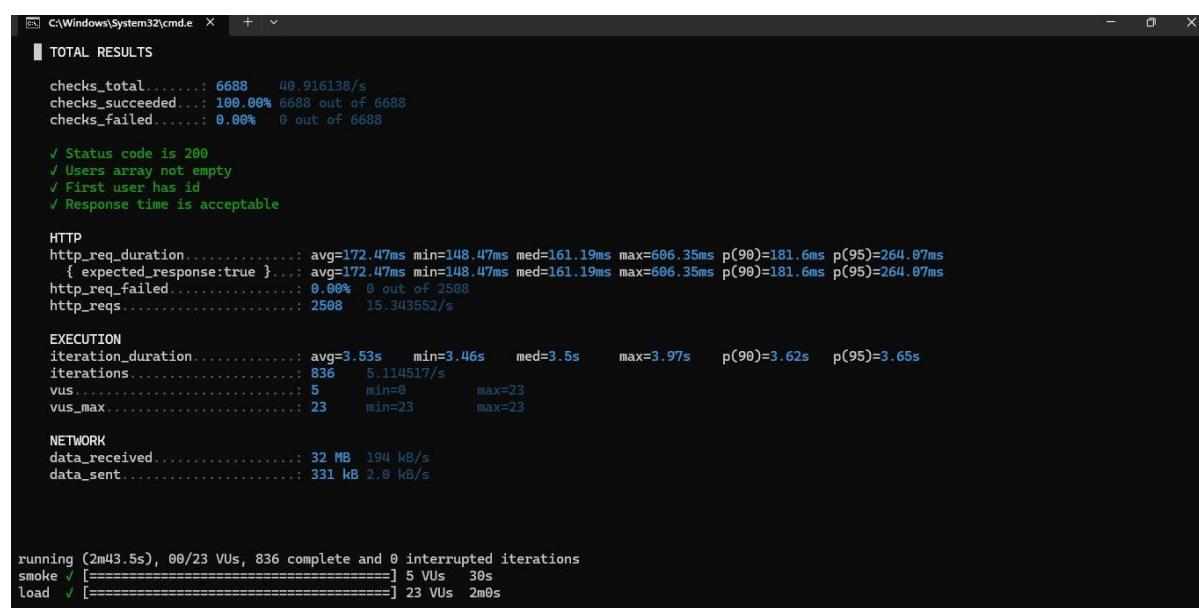
Conclusion (Screenshot 1):

The system demonstrated:

- Zero failed HTTP requests
- Stable performance under concurrent load
- Fast response times (264.07ms at p95)
- 100% successful checks

Final Result: PASS

The API is stable and performs efficiently under the tested load conditions.



A screenshot of a Windows Command Prompt window titled "C:\Windows\System32\cmd.e". The window displays the results of a k6 load test. The output is color-coded: green for success and blue for metrics. The results are organized into sections: TOTAL RESULTS, HTTP, EXECUTION, NETWORK, and a summary at the bottom.

```
TOTAL RESULTS
checks_total.....: 6688  40.916138/s
checks_succeeded.: 100.00% 6688 out of 6688
checks_failed....: 0.00%  0 out of 6688

✓ Status code is 200
✓ Users array not empty
✓ First user has id
✓ Response time is acceptable

HTTP
http_req_duration.....: avg=172.47ms min=148.47ms med=161.19ms max=606.35ms p(90)=181.6ms p(95)=264.07ms
{ expected_response:true }.....: avg=172.47ms min=148.47ms med=161.19ms max=606.35ms p(90)=181.6ms p(95)=264.07ms
http_req_failed.....: 0.00%  0 out of 2508
http_reqs.....: 2508  15.343552/s

EXECUTION
iteration_duration.....: avg=3.53s  min=3.46s  med=3.5s   max=3.97s  p(90)=3.62s  p(95)=3.65s
iterations.....: 836  5.114517/s
vus.....: 5  min=0  max=23
vus_max.....: 23  min=23  max=23

NETWORK
data_received.....: 32 MB  194 kB/s
data_sent.....: 331 kB  2.0 kB/s

running (2m43.5s), 00/23 VUs, 836 complete and 0 interrupted iterations
smoke ✓ [=====] 5 VUs  30s
load ✓ [=====] 23 VUs  2m0s
```

Test Configuration

k6 Load Testing Results - Performance Report:

Scenarios:

Smoke test (5 VUs, 30s) + Load test (23 VUs, 2m)

Duration:

2m50s total

Script:

FileName.js

Configured Scenarios

Two scenarios were executed:

Smoke Scenario

- Virtual Users: 5
- Duration: 30 seconds
- Graceful stop: 10 seconds

Purpose:

To validate basic API functionality under minimal load.

Load Scenario

- Virtual Users: 23
- Duration: 2 minutes
- Start Time: After 40 seconds
- Graceful stop: 10 seconds

Purpose:

To measure system performance under moderate concurrent load.

Maximum VUs reached: **23**

Threshold Evaluation

All configured thresholds passed successfully:

Metric	Threshold	Result	Status
Success Rate	> 94%	100.00%	✓ PASS
Response Time (p95)	< 1000ms	264.07ms	✓ PASS
Failure Rate	< 20%	0.00%	✓ PASS

Conclusion (Screenshot 2)

All thresholds were met:

- No failed requests

k6 Load Testing Results - Performance Report:

- Excellent response time
- All functional checks passed

This confirms that the API behaves correctly and efficiently during both smoke and load tests.