JMETER Amar Solution Performance report

📊 JMeter Summary Report

🔹 Test Overview

- **Tool: Apache JMeter 5.6.3**
- **Test Type: HTTP Performance Test**
- **Thread Group: users**
- **Sampler: HTTP Request**
- **Total Samples: 100**
- **Reported By: Mouno Patrick Desilva(Jr. SQA - Akaar It LTD)**

🔹 Performance Metrics

Metric	Value
Total Samples	100
Average Response Time	239 ms
Minimum Response Time	95 ms
Maximum Response Time	1366 ms
Standard Deviation	279.17 ms
Standard Deviation %	116.8%
Error Rate	0.00%

Throughput	**9.8 requests/sec**
Received Data	**1241.68 KB/sec**
Sent Data	**2.25 KB/sec**
Average Response Size	**130,199.5 bytes**

🔹 Result Analysis

- **All 100 requests executed successfully with 0% error rate, indicating stable functionality.**
- **The average response time (239 ms) is acceptable for normal application usage.**
- **The maximum response time (1366 ms) indicates occasional slow responses.**
- **The standard deviation is 279.17 ms (116.8%), showing high variation in response times.**
- **Backend processing delays, database performance issues, or inconsistent server resource utilization may cause high variation.**

🔹 Recommendations

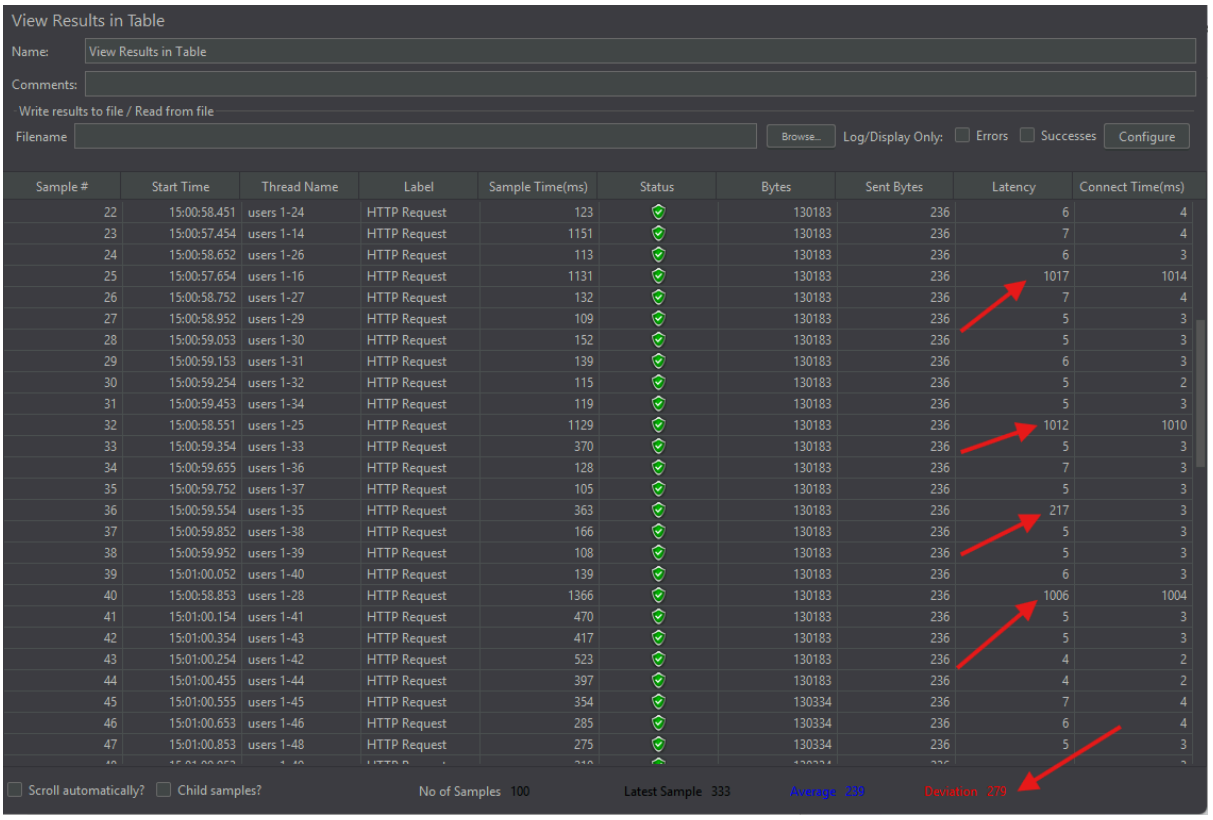
1. **Investigate Slow Requests**
   Analyze requests with higher response times (close to 1366 ms) using JMeter listeners or server logs to identify bottlenecks.
2. **Backend Optimization**
   Review database queries, API logic, and third-party service calls to reduce response time variability.
3. **Increase Test Duration & Load**
   Run longer tests with increased users to observe performance stability under sustained load.
4. **Monitor Server Resources**
   Track CPU, memory, and network usage during test execution to identify resource constraints.

5. **Implement Caching Mechanisms**
   Use caching (if applicable) to reduce response times for frequently accessed data.
6. **Retest After Optimization**
   Perform regression performance testing after fixes to confirm improvements in average response time and standard deviation.

🔹 Conclusion

The application is functionally stable with zero errors under the tested load. However, the high standard deviation (116.8%) indicates inconsistent performance. Implementing the recommended optimizations and re-testing will help achieve more consistent and reliable response times.

🔹 Attachments :



Sample #	Start Time	Thread Name	Label	Sample Time(ms)	Status	Bytes	Sent Bytes	Latency	Connect Time(ms)
22	15:00:58.451	users 1-24	HTTP Request	123		130183	236	6	4
23	15:00:57.454	users 1-14	HTTP Request	1151		130183	236	7	4
24	15:00:58.652	users 1-26	HTTP Request	113		130183	236	6	3
25	15:00:57.654	users 1-16	HTTP Request	1131		130183	236	1017	1014
26	15:00:58.752	users 1-27	HTTP Request	132		130183	236	7	4
27	15:00:58.952	users 1-29	HTTP Request	109		130183	236	5	3
28	15:00:59.053	users 1-30	HTTP Request	152		130183	236	5	3
29	15:00:59.153	users 1-31	HTTP Request	139		130183	236	6	3
30	15:00:59.254	users 1-32	HTTP Request	115		130183	236	5	2
31	15:00:59.453	users 1-34	HTTP Request	119		130183	236	5	3
32	15:00:58.551	users 1-25	HTTP Request	1129		130183	236	1012	1010
33	15:00:59.354	users 1-33	HTTP Request	370		130183	236	5	3
34	15:00:59.655	users 1-36	HTTP Request	128		130183	236	7	3
35	15:00:59.752	users 1-37	HTTP Request	105		130183	236	5	3
36	15:00:59.554	users 1-35	HTTP Request	363		130183	236	217	3
37	15:00:59.852	users 1-38	HTTP Request	166		130183	236	5	3
38	15:00:59.952	users 1-39	HTTP Request	108		130183	236	5	3
39	15:01:00.052	users 1-40	HTTP Request	139		130183	236	6	3
40	15:00:58.853	users 1-28	HTTP Request	1366		130183	236	1006	1004
41	15:01:00.154	users 1-41	HTTP Request	470		130183	236	5	3
42	15:01:00.354	users 1-43	HTTP Request	417		130183	236	5	3
43	15:01:00.254	users 1-42	HTTP Request	523		130183	236	4	2
44	15:01:00.455	users 1-44	HTTP Request	397		130183	236	4	2
45	15:01:00.555	users 1-45	HTTP Request	354		130334	236	7	4
46	15:01:00.653	users 1-46	HTTP Request	285		130334	236	6	4
47	15:01:00.853	users 1-48	HTTP Request	275		130334	236	5	3

JMETER 360 Performance report

📊 JMeter Summary Report

🔹 Test Overview

- Tool: Apache JMeter 5.6.3
- Test Type: HTTP Load / Performance Test
- Thread Group: Users
- Sampler: HTTP Request
- Total Samples: 100

🔹 Performance Metrics

Metric	Value
Total Samples	100
Average Response Time	775 ms
Minimum Response Time	424 ms
Maximum Response Time	1764 ms
Standard Deviation	212.73 ms
Standard Deviation %	27.45%
Error Rate	0.00%
Throughput	56.7 requests/sec
Received Data	994.83 KB/sec
Sent Data	28.40 KB/sec
Average Response Size	17,970 bytes

🔹 Standard Deviation % Calculation

$$
\left(212.73 \div 775\right) \times 100 \approx \mathbf{27.45\%}
$$

🔹 Result Analysis

- **All 100 HTTP requests were executed successfully with 0% error rate, indicating stable application behavior.**
- **The average response time (775 ms) is acceptable under moderate load.**
- **The maximum response time (1764 ms) shows some slower responses but not extreme.**
- **Standard deviation of 27.45% indicates moderate and acceptable variation in response times.**
- **High throughput (56.7 req/sec) shows the system can handle concurrent users efficiently.**
- **Consistent data transfer rates suggest stable request/response payloads.**

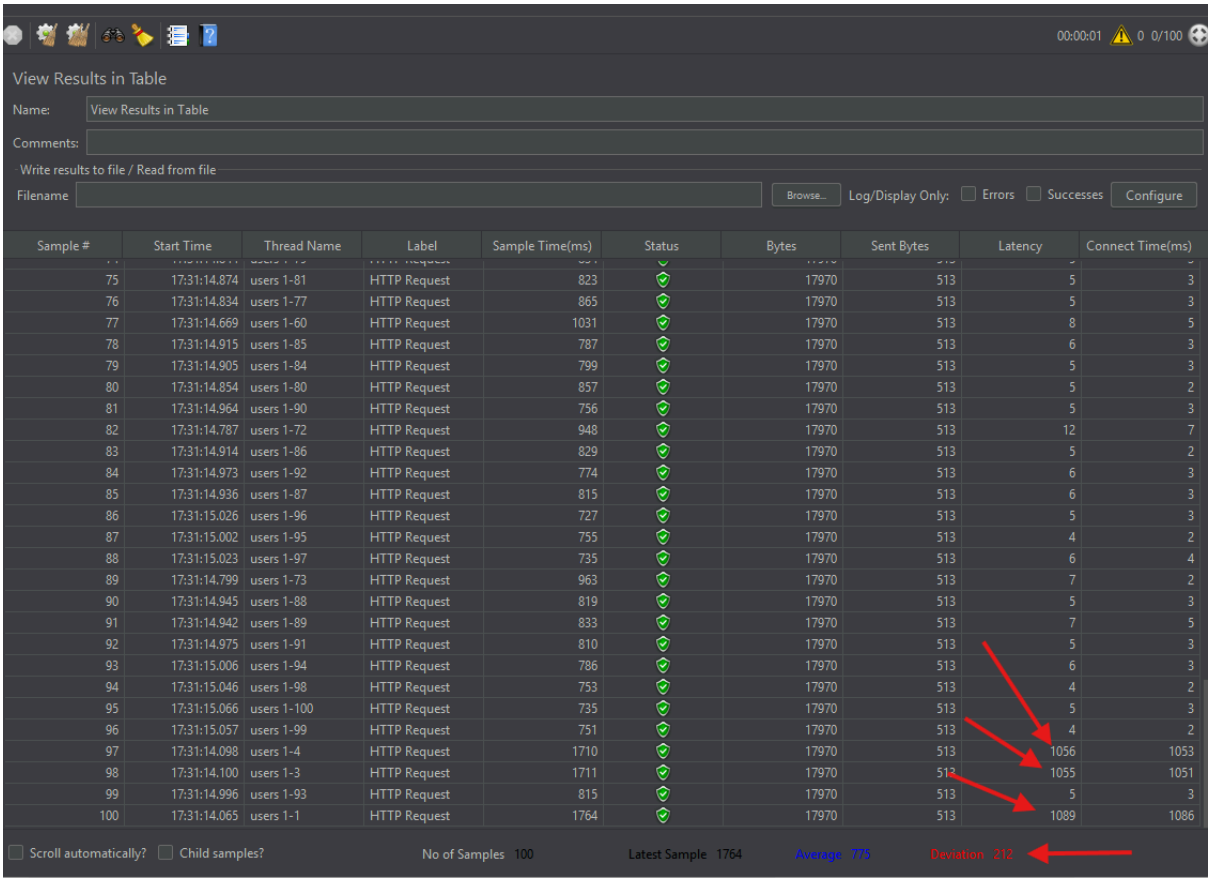
🔹 Recommendations

1. **Monitor Peak Response Times**
   Investigate requests closer to the maximum response time (1764 ms) to ensure they don't increase under higher load.
2. **Backend Performance Review**
   Check database queries, API logic, and external service calls contributing to slower responses.
3. **Run Stress Testing**
   Increase concurrent users gradually to identify the system's breaking point.
4. **Optimize Server Resources**
   Review CPU, memory, and thread utilization during peak throughput.
5. **Enable Performance Monitoring Tools**
   Use APM tools (e.g., logs, server monitoring) alongside JMeter for deeper insights.

🔹 Conclusion

The application demonstrates good performance and stability under the tested load with zero failures. The standard deviation (27.45%) indicates acceptable response time consistency. With minor backend optimization and further stress testing, the system can handle higher workloads reliably.

Attachments :



Sample #	Start Time	Thread Name	Label	Sample Time(ms)	Status	Bytes	Sent Bytes	Latency	Connect Time(ms)
75	17:31:14.874	users 1-81	HTTP Request	823		17970	513	5	3
76	17:31:14.834	users 1-77	HTTP Request	865		17970	513	5	3
77	17:31:14.669	users 1-60	HTTP Request	1031		17970	513	8	5
78	17:31:14.915	users 1-85	HTTP Request	787		17970	513	6	3
79	17:31:14.905	users 1-84	HTTP Request	799		17970	513	5	3
80	17:31:14.854	users 1-80	HTTP Request	857		17970	513	5	2
81	17:31:14.964	users 1-90	HTTP Request	756		17970	513	5	3
82	17:31:14.787	users 1-72	HTTP Request	948		17970	513	12	7
83	17:31:14.914	users 1-86	HTTP Request	829		17970	513	5	2
84	17:31:14.973	users 1-92	HTTP Request	774		17970	513	6	3
85	17:31:14.936	users 1-87	HTTP Request	815		17970	513	6	3
86	17:31:15.026	users 1-96	HTTP Request	727		17970	513	5	3
87	17:31:15.002	users 1-95	HTTP Request	755		17970	513	4	2
88	17:31:15.023	users 1-97	HTTP Request	735		17970	513	6	4
89	17:31:14.799	users 1-73	HTTP Request	963		17970	513	7	2
90	17:31:14.945	users 1-88	HTTP Request	819		17970	513	5	3
91	17:31:14.942	users 1-89	HTTP Request	833		17970	513	7	5
92	17:31:14.975	users 1-91	HTTP Request	810		17970	513	5	3
93	17:31:15.006	users 1-94	HTTP Request	786		17970	513	6	3
94	17:31:15.046	users 1-98	HTTP Request	753		17970	513	4	2
95	17:31:15.066	users 1-100	HTTP Request	735		17970	513	5	3
96	17:31:15.057	users 1-99	HTTP Request	751		17970	513	4	2
97	17:31:14.098	users 1-4	HTTP Request	1710		17970	513	1056	1053
98	17:31:14.100	users 1-3	HTTP Request	1711		17970	513	1055	1051
99	17:31:14.996	users 1-93	HTTP Request	815		17970	513	5	3
100	17:31:14.065	users 1-1	HTTP Request	1764		17970	513	1089	1086