

2023 – Learn JMeter By Examples

Session 4 – Main KPIs

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Main KPI

Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Throughput	Received KB/s...	Sent KB/sec	Avg. Bytes
Open JMeter Official Site	1	399	399	399	0.00	0.00%	2.5/sec	52.00	0.29	21247.0
Open JMeter License Page	1	456	456	456	0.00	0.00%	2.2/sec	65.23	0.53	30460.0
Transaction Controller	1	855	855	855	0.00	0.00%	1.2/sec	58.78	0.42	51707.0
Debug Sampler	1	0	0	0	0.00	0.00%	.0/hour	0.00	0.00	283.0
TOTAL	4	427	0	855	302.96	0.00%	4.7/sec	117.75	0.84	25924.2

Samples - The number of samples with the same label

Average (ART Average Response Time) - The average elapsed time (Response Time) of a set of results

Std. Dev. - the Standard Deviation of the sample elapsed time (the smaller the better)

Error % - Percentage of requests with errors

Received KB/sec - The throughput measured in Kilobytes per second

Sent KB/sec - The throughput measured in Kilobytes per second

Avg. Bytes - average size of the sample response in bytes.

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Main KPI

Throughput - the Throughput (TPS/QPS) is measured in requests per second/minute/hour.

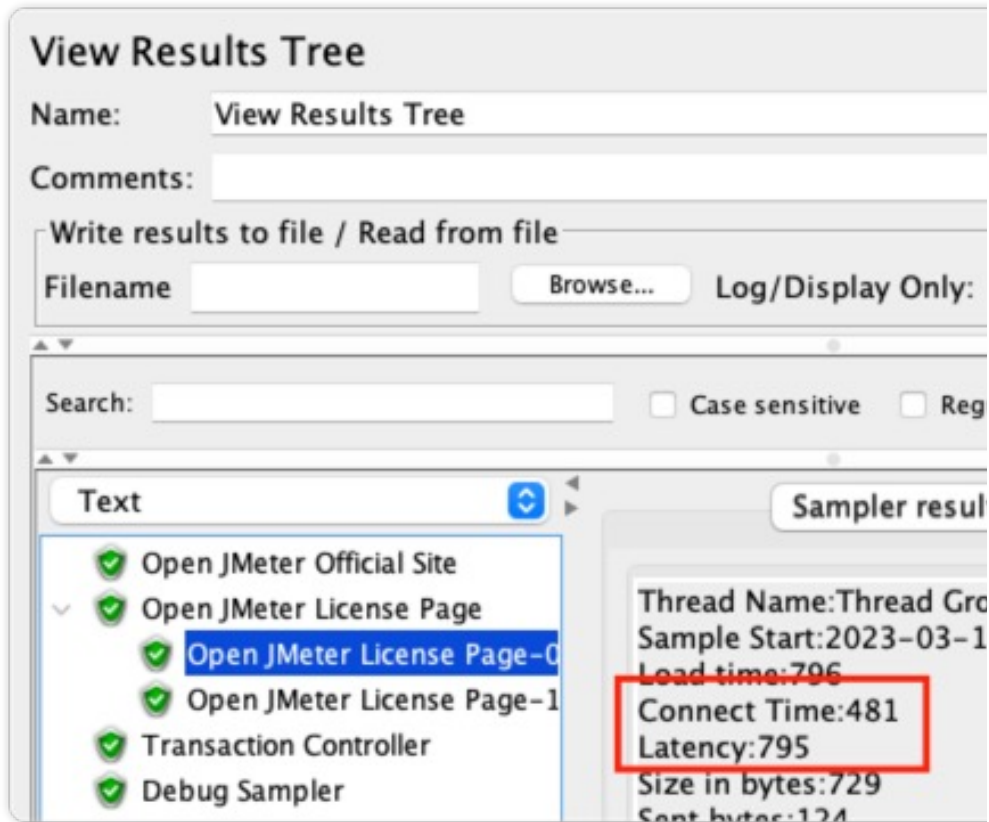
- TPS: (Transaction Per Second)
- QPS: (Query Per Second)

$$\text{Throughput} = \text{Total Samples} / \text{Total Elapsed time}$$

Label ▼	# Samp...	Average
Transcation Controller - Open Home Page	3	2598
Transaction Controller-Logoff	3	828
Transaction Controller - Login	3	10269
Transaction Controller-Delete User	3	818
Transaction Controller-Click Login	3	7671
/web/index.php/pim/viewPhoto/empNumber/8-42	3	402
/web/index.php/pim/viewPhoto/empNumber/7-27	3	416
/web/index.php/pim/viewPhoto/empNumber/2-41	3	422

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- **TPS:** Transaction level, which includes one or several requests
 - **QPS:** Single Request level

Main KPI



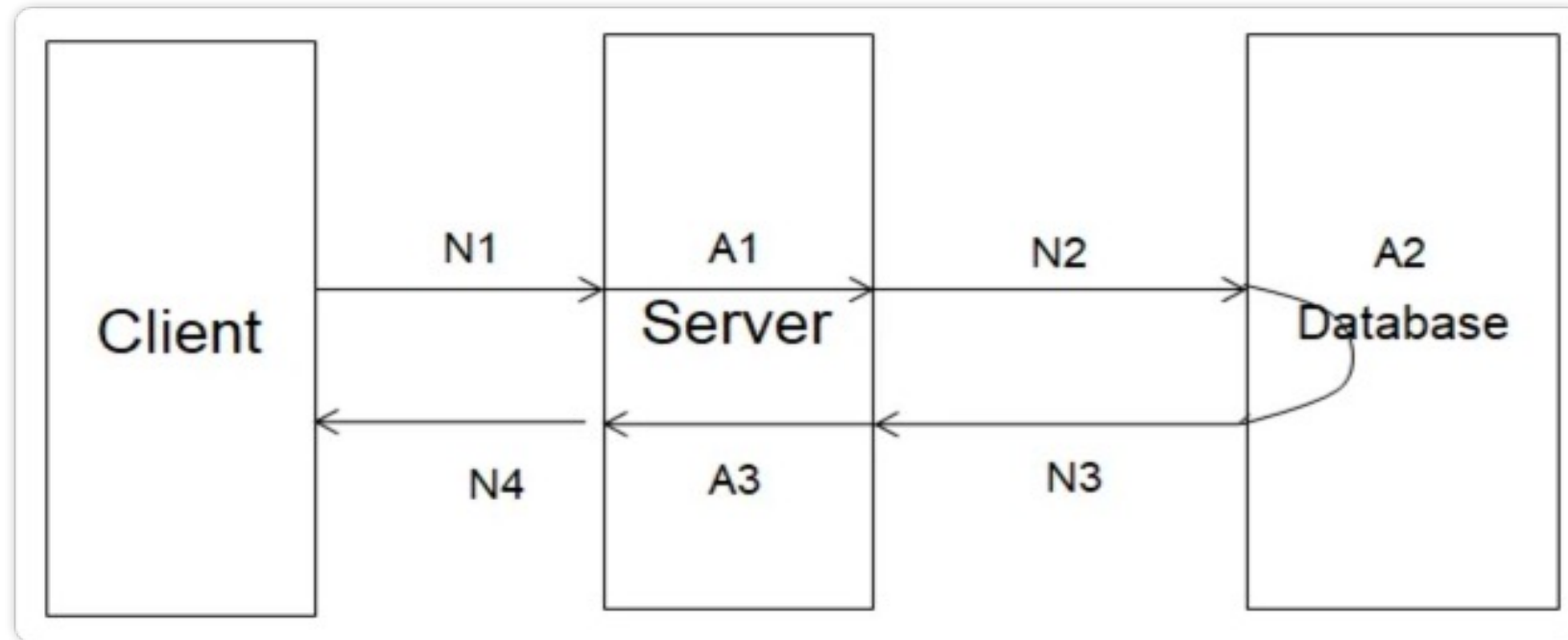
Connect Time: time taken to establish TCP connection(TCP Level), then client send further requests(HTTP Level).

Latency Time: Latency is a difference between time when request was sent and time **when response has started to be received.** (Connect time is included while calculating Latency Time)

Response time: (= Sample time = Load time = elapsed time) could be a difference between the time when the request was sent and time **once a response has been completely received.**

- ✓ Response time is always greater than or equal to Latency Time
- ✓ The larger the file is, the larger the difference between response time and latency are going to be.

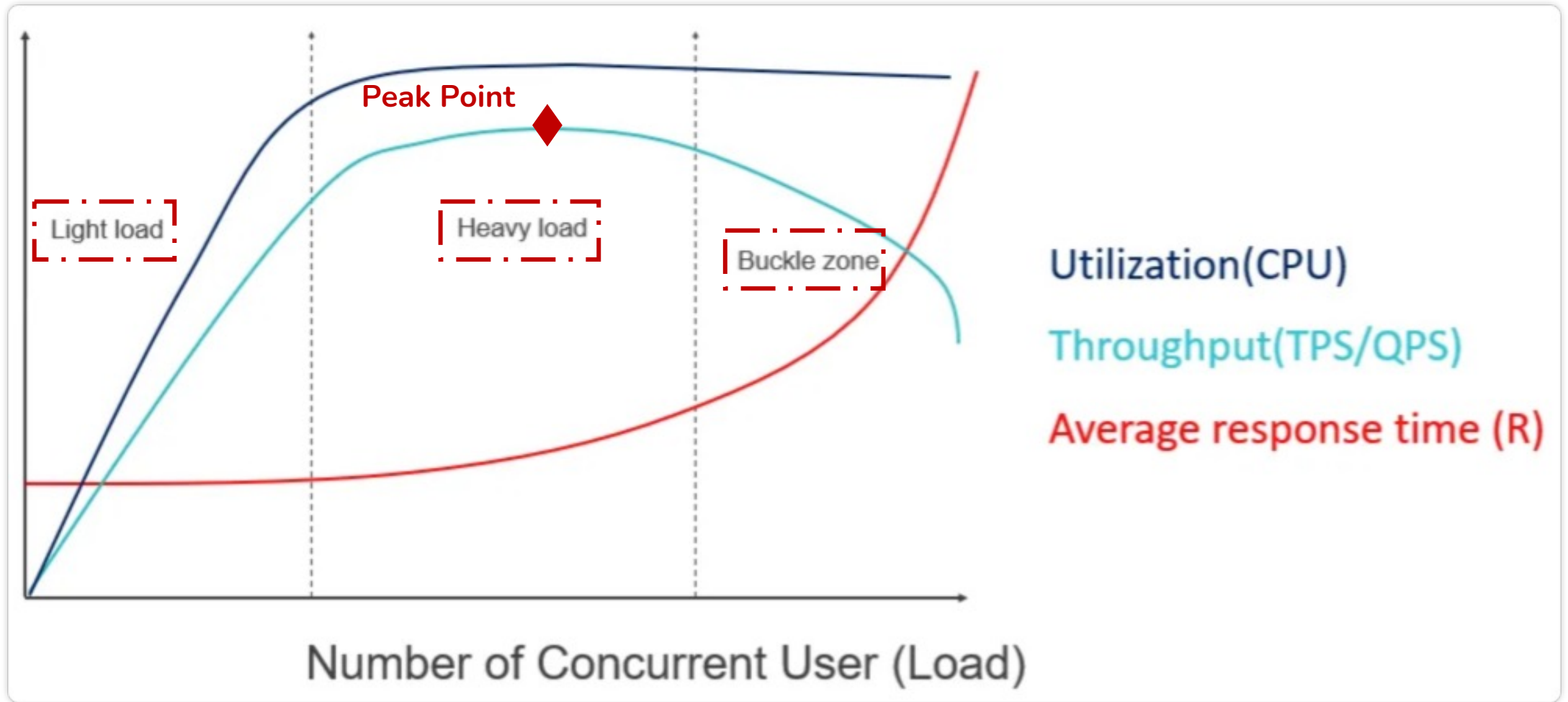
Response Time



Response Time: $N1 + N2 + N3 + N4 + A1 + A2 + A3$:

- Network Time: $N1 + N2 + N3 + N4$
- Backend Server Processing Time: $A1 + A3$
- Database Server Processing Time: $A2$

Understand KPI



Next Session : Plugins Manager

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Thank
You!

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GitHub Link:

https://github.com/DaniellLovePerf/2023_JMeter_Full_Course.git

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