

Performance Report

Assignment -1

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Instances		Avg. Response Time (ms)	Avg. Server Throughput(ops/s)
1	Seller	0.2405	4570
	Buyer	4.058	6687
10	Seller	0.8671	1270
	Buyer	4.571	1684
100	Seller	7.0068	163
	Buyer	22.54	197

Seller: For evaluating the seller's metrics, we are doing the following 1000 client operations: 1 'login' + 999 'getProducts'. In this run, about 90 computations of Average Response Times are collected, and 1 value of Avg. Server Throughput is collected. For multiple clients, all values are averaged. As can be seen, there is a noticeable change in the metric values as more clients are handled simultaneously. When increasing the number of concurrent clients from 10 to 100, the response time increased by a factor of about 29. Simultaneously, the throughput decreased sharply by a factor of 28. This means that the DB and server take longer to complete operations (DB access, query execution, sending response) as more clients try to execute the same functions.

Buyer: Similar to the seller's metrics, to evaluate the buyer's metrics, we are doing the following 1000 client operations: 1000 'getSellerRating'. In this run, 1 Average Server Throughput is collected. For multiple clients all values are averaged. There is a noticeable change in the metric values as more clients are handled simultaneously. When the number of concurrent clients increased from 1 to 10, the response time increased by a factor of 12.6 and the average throughput decreased by 74 percent. When the concurrent clients are increased from 10 to 100, there is a sharp increase in response time and decrease in throughput by 88 percent. Same reason as the seller, the DB and server take longer to complete operations such as any DB operations, communication on sockets as more clients try to execute the same functions.