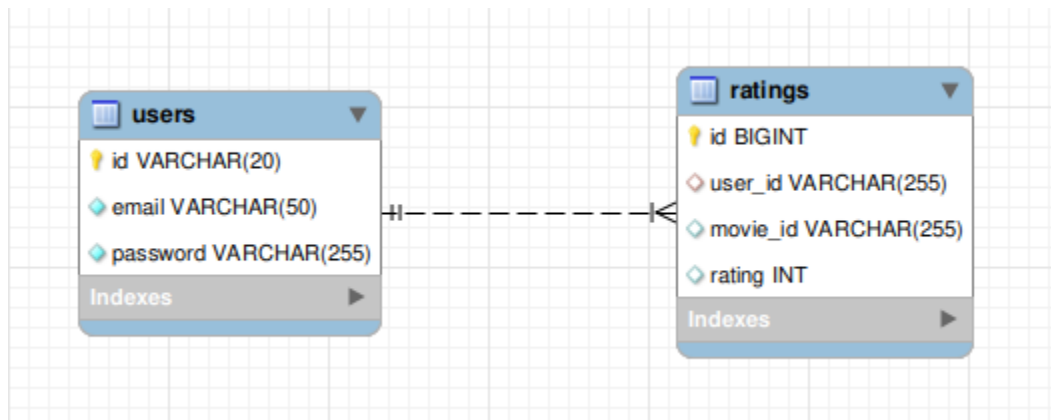
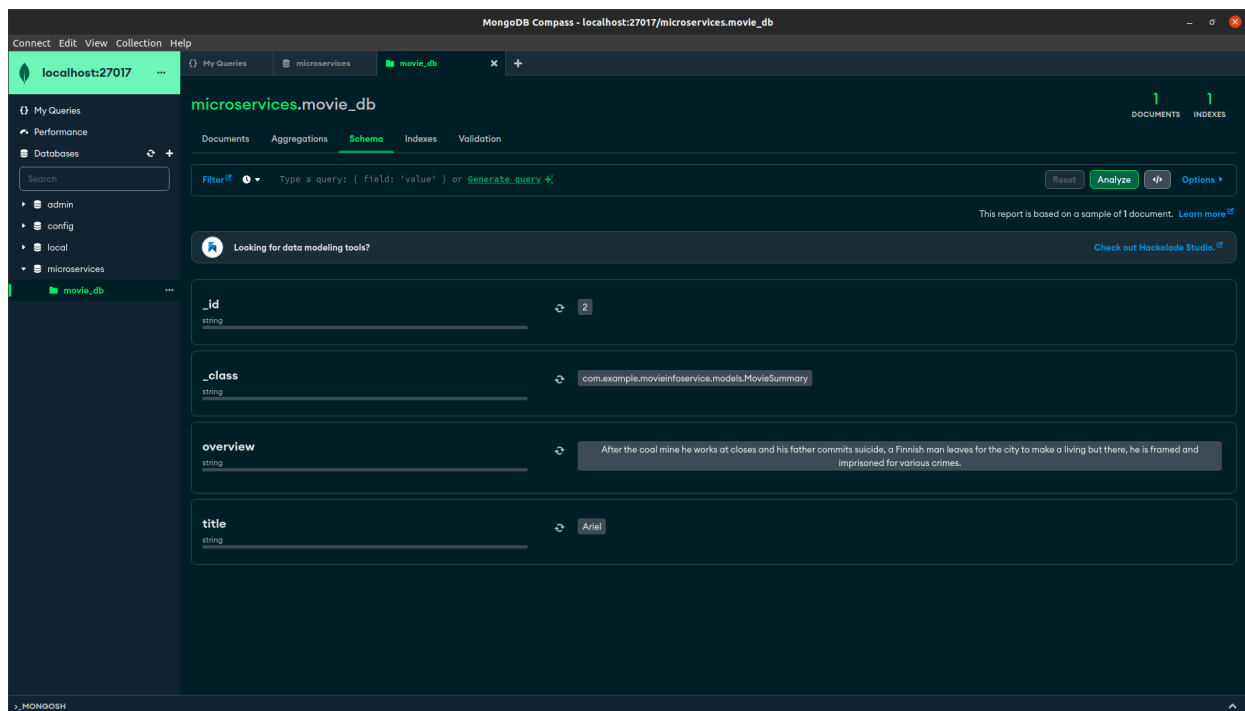


MySQL Schema:



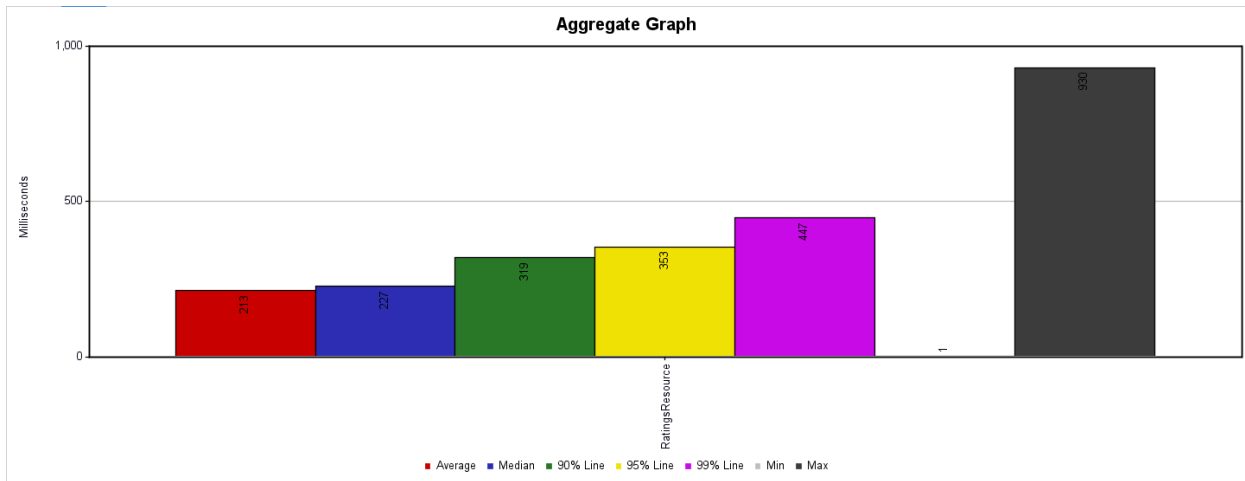
MongoDB Schema:



JMeter:

First Request: <http://localhost:8083/ratings/{userId}>

Latency distribution under normal load:



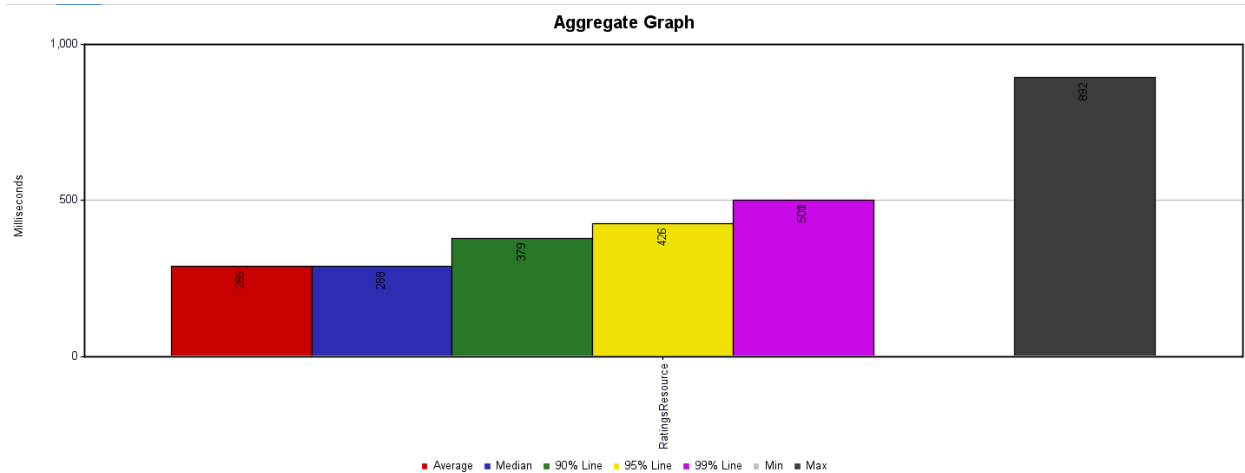
Throughput:

Label	# Samples	Average	Median	90% Line	95% Line	99% Line	Min	Maximum	Error %	Throughput	Received KB/...	Sent KB/sec
RatingsResou...	40000	213	227	319	353	447	1	930	0.00%	6317.1/sec	3325.12	789.64
TOTAL	40000	213	227	319	353	447	1	930	0.00%	6317.1/sec	3325.12	789.64

Maximum number of requests that the server fulfill without failure: 2000

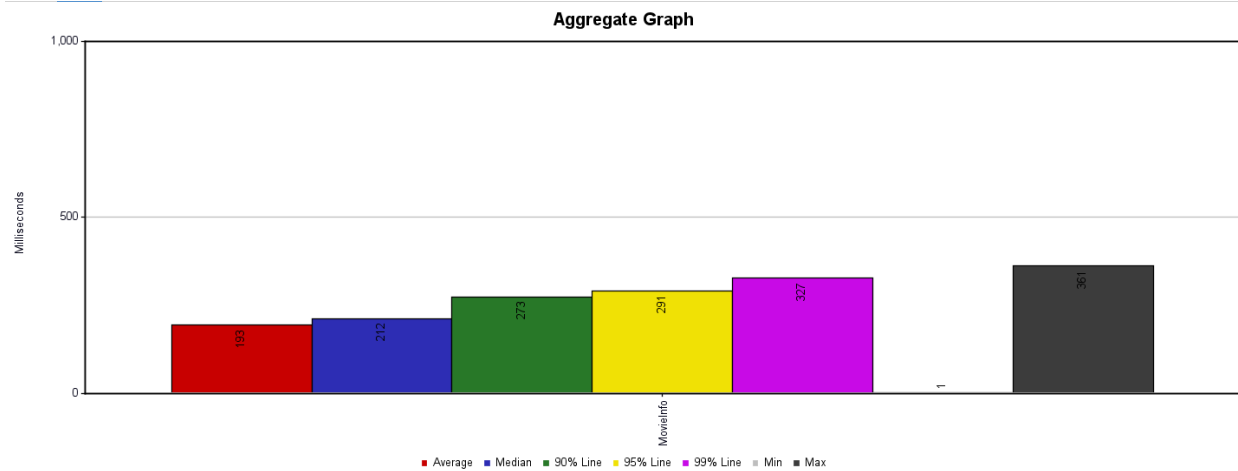
When the number of requests reach 2500, fail cases start to appear with error rate of 1.67%

Label	# Samples	Average	Median	90% Line	95% Line	99% Line	Min	Maximum	Error %	Throughput	Received KB/...	Sent KB/sec
RatingsResou...	90000	253	273	361	393	474	0	804	1.67%	2767.8/sec	1551.43	340.19
	90000	253	273	361	393	474	0	804	1.67%	2767.8/sec	1551.43	340.19



Second Request: <http://localhost:8082/movies/{movieId}>

Latency distribution under normal load:



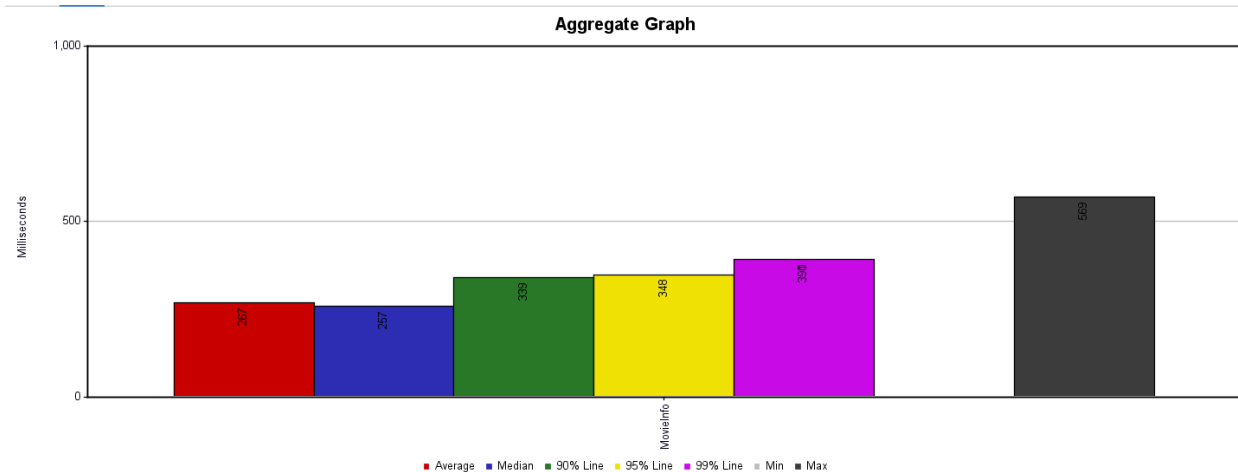
Throughput:

Label	# Samples	Average	Median	90% Line	95% Line	99% Line	Min	Maximum	Error %	Throughput	Received KB/...	Sent KB/sec
MovieInfo	40000	193	212	273	291	327	1	361	0.00%	6958.9/sec	2466.89	876.66
TOTAL	40000	193	212	273	291	327	1	361	0.00%	6958.9/sec	2466.89	876.66

Maximum number of requests that the server fulfill without failure: 2000

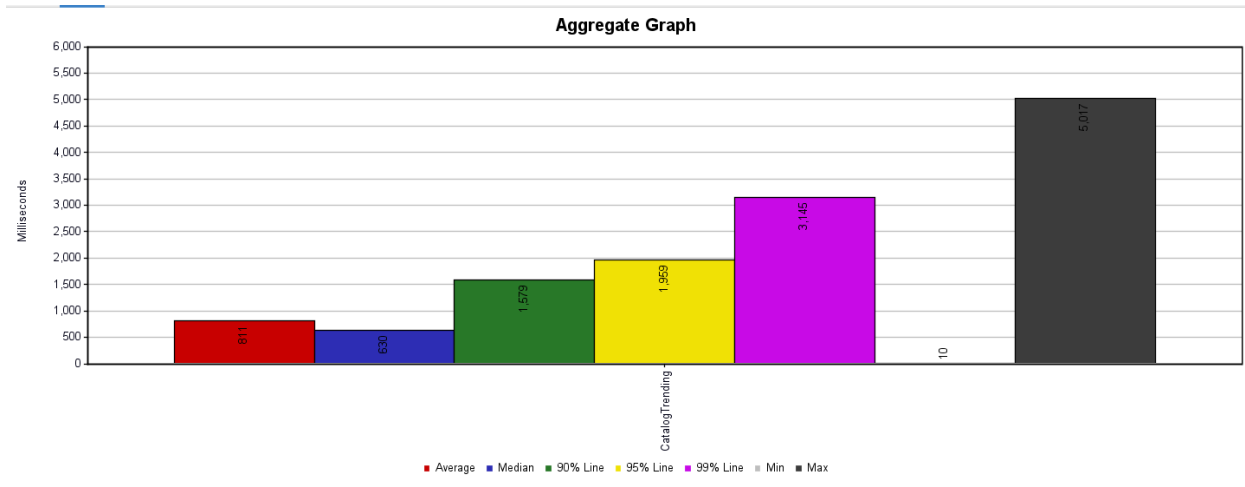
When the number of requests reach 2500, fail cases start to appear with error rate of 0.59%

Label	# Samples	Average	Median	90% Line	95% Line	99% Line	Min	Maximum	Error %	Throughput	Received KB/...	Sent KB/sec
MovieInfo	90000	231	251	327	343	369	0	635	0.59%	3480.0/sec	1279.03	435.82
TOTAL	90000	231	251	327	343	369	0	635	0.59%	3480.0/sec	1279.03	435.82



Third Request: <http://localhost:8081/catalog/trending>

Latency distribution under normal load:



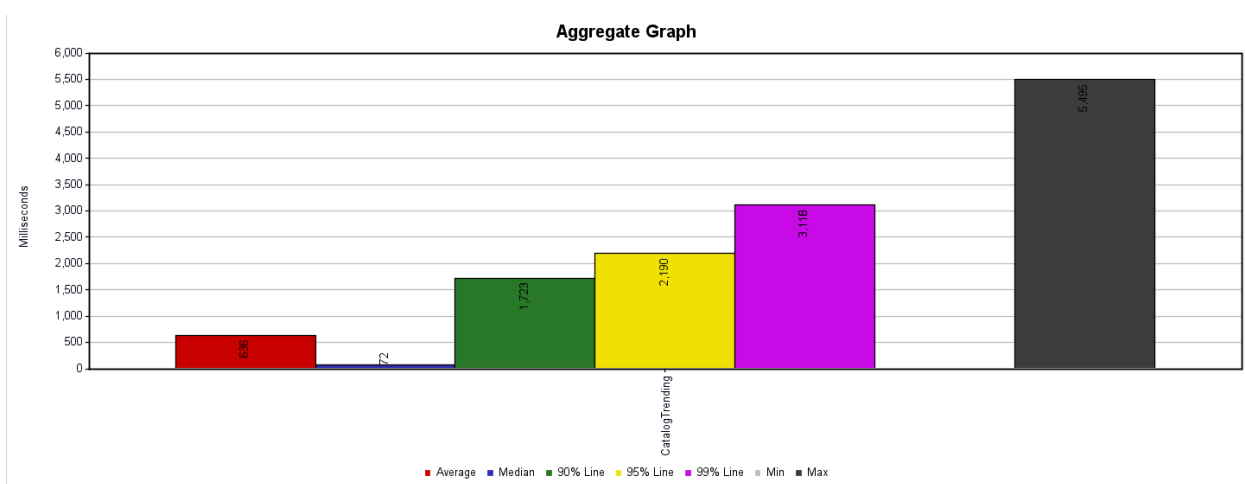
Throughput:

Label	# Samples	Average	Median	90% Line	95% Line	99% Line	Min	Maximum	Error %	Throughput	Received KB/...	Sent KB/sec
CatalogTrend...	10000	811	630	1579	1959	3145	10	5017	0.00%	520.7/sec	454.77	67.12
TOTAL	10000	811	630	1579	1959	3145	10	5017	0.00%	520.7/sec	454.77	67.12

Maximum number of requests that the server fulfill without failure: 500

When the number of requests reach 600, fail cases start to appear with an error rate of 62.01% and the server needs to be restarted.

Label	# Samples	Average	Median	90% Line	95% Line	99% Line	Min	Maximum	Error %	Throughput	Received KB/...	Sent KB/sec
CatalogTrend...	12000	636	72	1723	2190	3116	0	5495	62.01%	741.8/sec	1150.74	49.65
TOTAL	12000	636	72	1723	2190	3116	0	5495	62.01%	741.8/sec	1150.74	49.65



GitHub Repo:

<https://github.com/mo-ayman/spring-boot-microservices>