PERFORMANCE REPORT

JMeter

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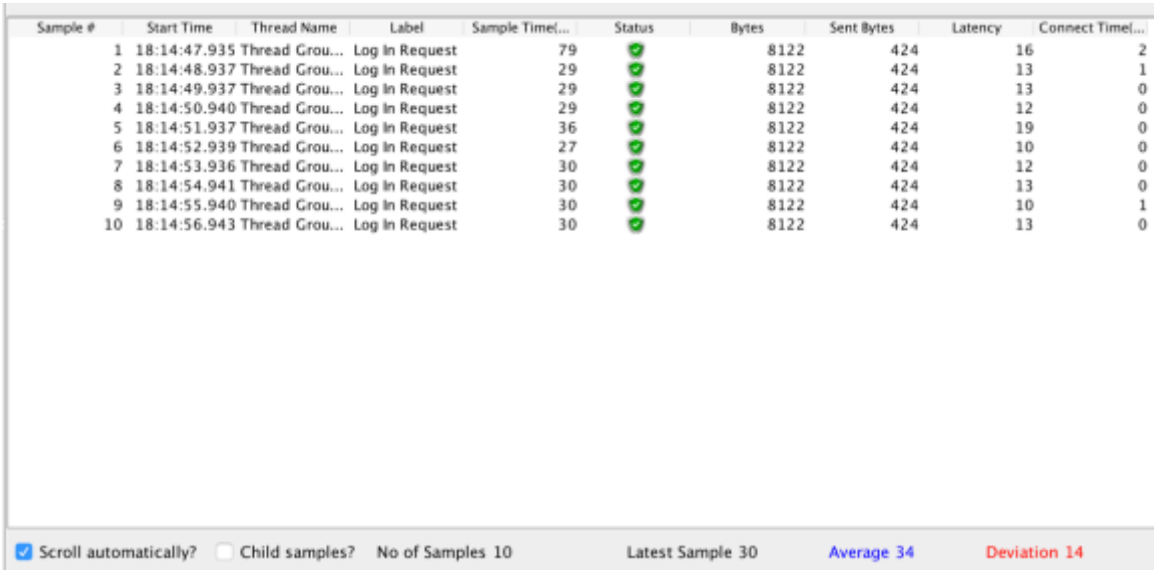
Tests on Development Server

Test Details

The test was fairly simple: JMeter would send, for each thread, a login request to the server. This will be enough to see how many requests the server can handle and also test our database, as each request will also make a database query for fetching the user and authenticate him.

10 Users, 10 Ramp-Up Time

With 10 Threads (Users) and a Ramp-up time of 10 seconds, the server behaved normally. The average request time was 34ms and all requests where successful. This means that the server can handle a request for second, which is expected.

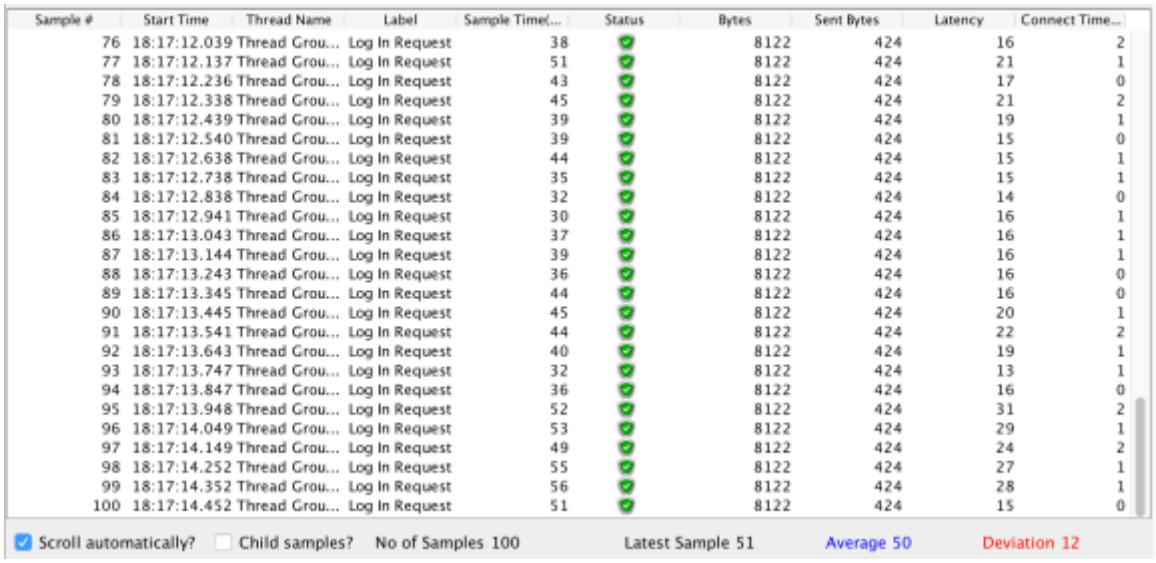


Sample #	Start Time	Thread Name	Label	Sample Time(...	Status	Bytes	Sent Bytes	Latency	Connect Time(...
1	18:14:47.935	Thread Grou...	Log In Request	79		8122	424	16	2
2	18:14:48.937	Thread Grou...	Log In Request	29		8122	424	13	1
3	18:14:49.937	Thread Grou...	Log In Request	29		8122	424	13	0
4	18:14:50.940	Thread Grou...	Log In Request	29		8122	424	12	0
5	18:14:51.937	Thread Grou...	Log In Request	36		8122	424	19	0
6	18:14:52.939	Thread Grou...	Log In Request	27		8122	424	10	0
7	18:14:53.936	Thread Grou...	Log In Request	30		8122	424	12	0
8	18:14:54.941	Thread Grou...	Log In Request	30		8122	424	13	0
9	18:14:55.940	Thread Grou...	Log In Request	30		8122	424	10	1
10	18:14:56.943	Thread Grou...	Log In Request	30		8122	424	13	0

Scroll automatically? Child samples? No of Samples 10 Latest Sample 30 Average 34 Deviation 14

100 users, 10 Ramp-Up Time

With 100 users and 10 Ramp-Up Time, the server also behaved normally. All requests where successful and the average time for each request was 50ms. Even though the average time for the requests was bigger, it was still a decent time. This means that the development server can handle 10 requests per second, for 10 seconds.

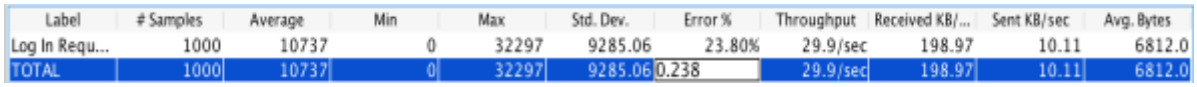


Sample #	Start Time	Thread Name	Label	Sample Time(...	Status	Bytes	Sent Bytes	Latency	Connect Time...
76	18:17:12.039	Thread Grou...	Log In Request	38		8122	424	16	2
77	18:17:12.137	Thread Grou...	Log In Request	51		8122	424	21	1
78	18:17:12.236	Thread Grou...	Log In Request	43		8122	424	17	0
79	18:17:12.338	Thread Grou...	Log In Request	45		8122	424	21	2
80	18:17:12.439	Thread Grou...	Log In Request	39		8122	424	19	1
81	18:17:12.540	Thread Grou...	Log In Request	39		8122	424	15	0
82	18:17:12.638	Thread Grou...	Log In Request	44		8122	424	15	1
83	18:17:12.738	Thread Grou...	Log In Request	35		8122	424	15	1
84	18:17:12.838	Thread Grou...	Log In Request	32		8122	424	14	0
85	18:17:12.941	Thread Grou...	Log In Request	30		8122	424	16	1
86	18:17:13.043	Thread Grou...	Log In Request	37		8122	424	16	1
87	18:17:13.144	Thread Grou...	Log In Request	39		8122	424	16	1
88	18:17:13.243	Thread Grou...	Log In Request	36		8122	424	16	0
89	18:17:13.345	Thread Grou...	Log In Request	44		8122	424	16	0
90	18:17:13.445	Thread Grou...	Log In Request	45		8122	424	20	1
91	18:17:13.541	Thread Grou...	Log In Request	44		8122	424	22	2
92	18:17:13.643	Thread Grou...	Log In Request	40		8122	424	19	1
93	18:17:13.747	Thread Grou...	Log In Request	32		8122	424	13	1
94	18:17:13.847	Thread Grou...	Log In Request	36		8122	424	16	0
95	18:17:13.948	Thread Grou...	Log In Request	52		8122	424	31	2
96	18:17:14.049	Thread Grou...	Log In Request	53		8122	424	29	1
97	18:17:14.149	Thread Grou...	Log In Request	49		8122	424	24	2
98	18:17:14.252	Thread Grou...	Log In Request	55		8122	424	27	1
99	18:17:14.352	Thread Grou...	Log In Request	56		8122	424	28	1
100	18:17:14.452	Thread Grou...	Log In Request	51		8122	424	15	0

Scroll automatically? Child samples? No of Samples 100 Latest Sample 51 Average 50 Deviation 12

1000 users 10 Ramp-up Time

With 1000 users and 10 Ramp-Up time, the server failed to handle many requests. Near ¼ of the requests where denied by the server and the average time for each request was 10737ms, which is more than what would be acceptable. That means that the server can't handle 100 requests per second, over 10 seconds.



Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Throughput	Received KB/...	Sent KB/sec	Avg. Bytes
Log In Requ...	1000	10737	0	32297	9285.06	23.80%	29.9/sec	198.97	10.11	6812.0
TOTAL	1000	10737	0	32297	9285.06	0.238	29.9/sec	198.97	10.11	6812.0

500 users 10 Ramp-up Time

With 500 users and 10 Ramp-up time, the server failed to handle approximately 10% of the requests, with an average of 6852ms for each request. That means that the server can’t handle 50 requests per second, over 10 seconds.

Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Throughput	Received KB/...	Sent KB/sec	Avg. Bytes
Log In Requ...	500	6825	1	23373	6185.10	12.20%	20.5/sec	149.07	7.72	7459.8
TOTAL	500	6825	1	23373	6185.10	12.20%	20.5/sec	149.07	7.72	7459.8

250 users, 10 Ramp-up Time

With 250 users and 10 Ramp-up time, the server handled every request successfully. That means that the server can handle 25 requests per second, over 10 seconds.

Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Throughput	Received KB/...	Sent KB/sec	Avg. Bytes
Log In Requ...	250	90	30	392	59.46	0.00%	24.8/sec	196.91	10.27	8126.0
TOTAL	250	90	30	392	59.46	0.00%	24.8/sec	196.91	10.27	8126.0

300 users, 10 Ramp-up Time

We can see that the server starts denying some requests after the 30 requests per second threshold. That means that the Django development server shouldn’t be used for production, as 30 requests per second are not much for a website.

Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Throughput	Received KB/...	Sent KB/sec	Avg. Bytes
Log In Requ...	300	619	1	1145	168.22	1.00%	29.0/sec	228.54	11.91	8072.3
TOTAL	300	619	1	1145	168.22	1.00%	29.0/sec	228.54	11.91	8072.3