

Environment: Analysis was performed on TEST environment.

General info:

	Host	Type	IP	Hosted Applications	Ports
STAGIN G	EPUAKYIW1686 T1	VM	10.17.172.226	EPUAKYIW1686T1.kyiv.epam.com	8080, 4444

System resources (TEST env):

CPU, GHz	Memory, Gb	Disk size, Gb
2	8	100

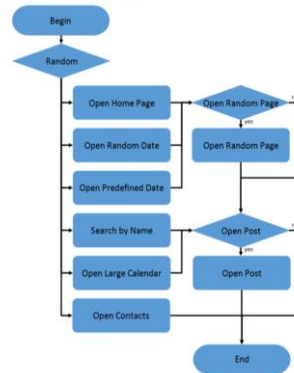
Test scenario

There are considered Main script for Anonymous user scenario for two type of probability usage where

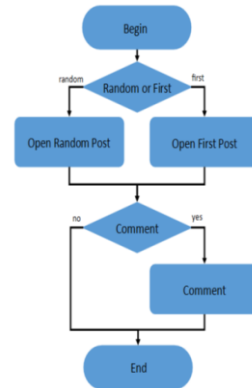
Main script



Anonymous script



Open Post script



Test conditions

Transaction	First Condition	Second Condition
open home page	random	15%
open random date	random	10%
open predefined date	random	30%
search by name	random	30%
open large calendar	random	10%
open contacts	random	5%
open random page	50%	50%
open post	50%	80%
open random post	50%	65%
open first post	50%	35%
add comment	50%	20%

Test Setup

	First Condition	Second Condition
number of virtual users	Up to 150	
ramp-up period(sec)	750	
duration(sec)	900	
think time (sec)	3-5	

Test Summary(100 posts 1-st and 2-nd conditions)

- 1 The maximum capacity of the application usage by Anonymous clients is found. For both scenarios it is restricted by the 100% CPU usage and a significant increase in the use of network resources. Adding more load leads to the application becomes unresponsive.
- 2 Saturation point is 108 users for the 1st scenario. Saturation point is 132 for the 2nd scenario.

Recommendation

- 1 Possibility to increasing CPU power.
- 2 Increase Network I/O.
- 3 After reaching the point of saturation, the application doesn't respond and no recovery is provided for. Perhaps we should add a recovery step or at least a stub which produced 500 errors.

Results: graphs and tables(100 posts 1-st and 2-nd conditions, for more details open dashboard HTMLReport > index)

1 Statistics

1-st condition

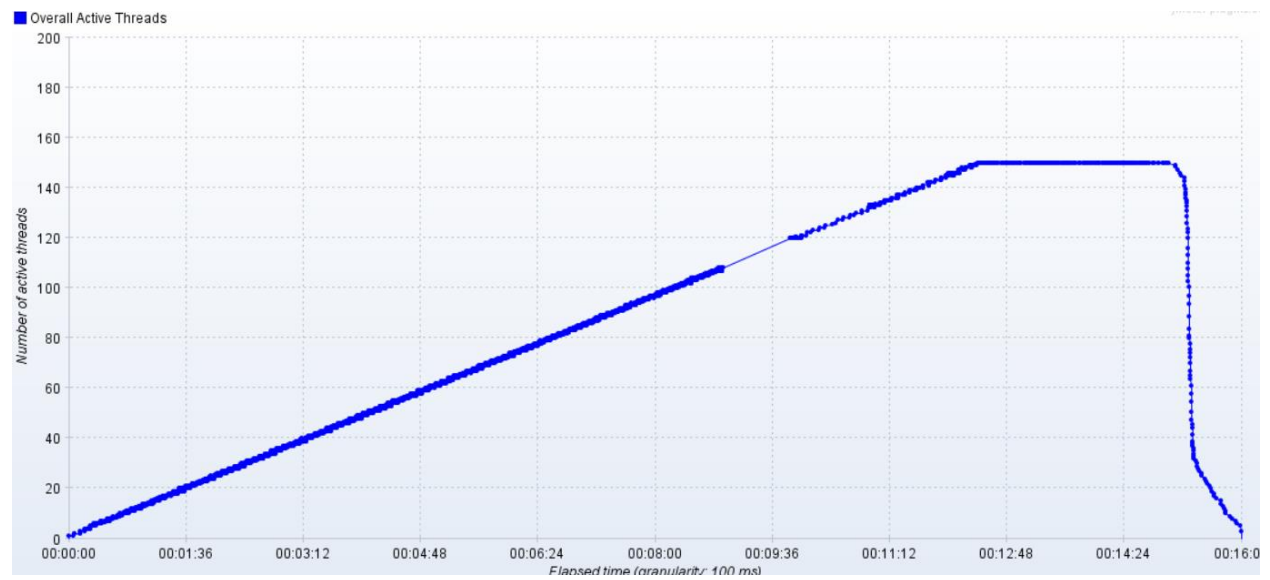
Statistics													
Requests		Executions				Response Times (ms)						Network (KB/sec)	
Label	#Samples	KO	Error %	Average	Min	Max	90th pct	95th pct	99th pct	Throughput	Received	Sent	
Total	7716	954	12.36%	7534.20	6	64991	60002.00	60002.00	63992.32	8.08	198.67	9.22	
Comment transaction	1201	102	8.49%	5197.76	13	64973	95.00	60003.00	64068.22	1.34	3.93	4.00	
Go To Contact transaction	521	30	5.76%	3543.41	19	64373	60.80	60002.00	63706.22	0.56	9.65	0.49	
Go to log in page transaction	150	43	28.67%	17213.72	6	60009	60002.00	60003.00	60007.47	0.19	0.74	0.02	
Go To Main Blog page transaction	150	45	30.00%	18258.71	26	64966	60002.00	63261.20	64933.87	0.16	3.49	0.10	
Log in transaction	150	44	29.33%	17644.19	31	60003	60003.00	60003.00	60003.00	0.17	3.85	0.14	
Open First or Random Post transaction	2515	244	9.70%	5954.36	23	64943	677.20	60002.00	64185.72	2.68	102.12	2.27	
Open Home Page transaction	513	48	9.36%	5702.61	26	64406	875.00	60002.00	63818.62	0.56	15.23	0.47	
Open Large Calendar transaction	529	56	10.59%	6475.12	25	64893	60001.00	60002.00	64104.60	0.58	13.30	0.49	
Open Predefined Date transaction	558	57	10.22%	6223.35	23	64880	60001.00	60002.00	63813.08	0.59	16.00	0.50	
Open Random Date transaction	506	58	11.46%	7007.30	22	64976	60002.00	60002.00	63996.39	0.55	14.47	0.46	
Open Random Page transaction	306	36	11.76%	7275.11	25	64913	60002.00	60007.25	64484.27	0.35	9.29	0.28	
Search by Name transaction	467	41	8.78%	5368.32	22	64991	108.20	60002.00	63960.96	0.52	12.33	0.44	

2-nd condition

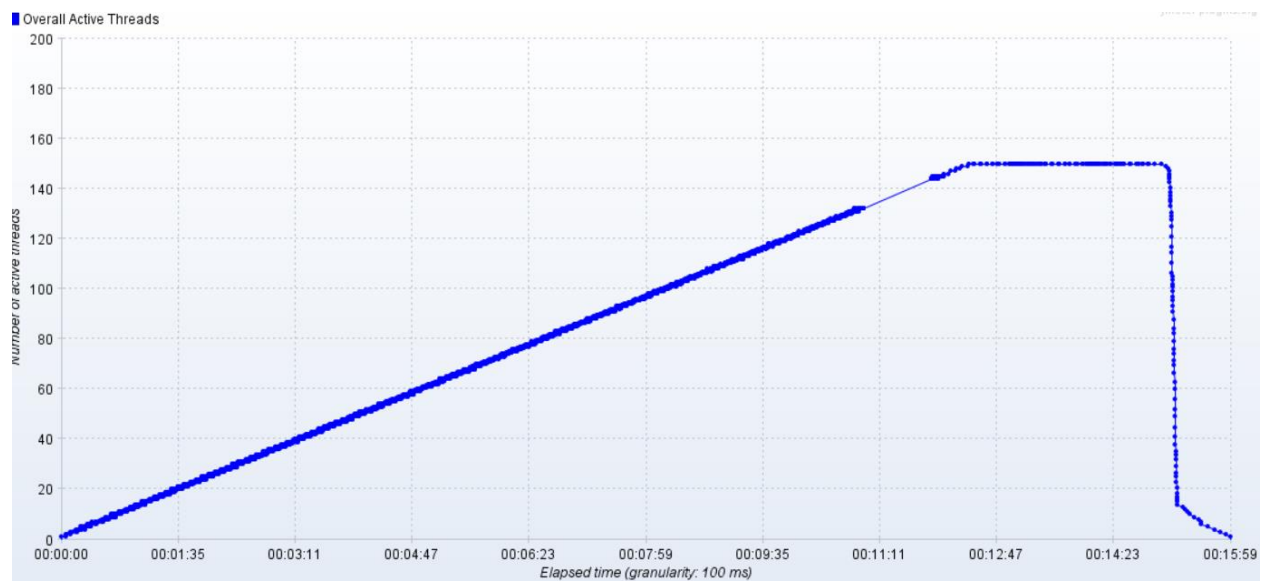
Statistics													
Requests		Executions			Response Times (ms)							Network (KB/sec)	
Label	#Samples	KO	Error %	Average	Min	Max	90th pct	95th pct	99th pct	Throughput	Received	Sent	
Total	11491	742	6.46%	3964.50	6	64991	96.00	60001.00	63570.08	12.02	363.25	11.99	
Comment transaction	728	39	5.36%	3288.48	13	64032	55.20	60002.00	63190.03	0.90	2.66	2.79	
Go To Contact transaction	272	17	6.25%	3828.23	19	64936	54.70	60001.00	63963.77	0.32	5.53	0.28	
Go to log in page transaction	150	19	12.67%	7612.50	6	60008	60002.00	60002.00	60006.98	0.19	0.80	0.03	
Go To Main Blog page transaction	150	20	13.33%	8250.33	26	64882	60002.00	63210.75	64732.57	0.16	4.23	0.12	
Log in transaction	150	19	12.67%	7643.25	31	60003	60002.00	60003.00	60003.00	0.17	4.65	0.17	
Open First Post transaction	1409	59	4.19%	2602.30	21	64855	152.00	227.50	60003.90	1.65	94.14	1.47	
Open Home Page transaction	759	32	4.22%	2610.39	25	64499	63.00	97.00	63309.00	0.86	24.52	0.75	
Open Large Calendar transaction	508	25	4.92%	3065.15	25	64879	66.10	33085.15	64273.00	0.58	14.22	0.52	
Open Predefined Date transaction	1529	80	5.23%	3228.61	22	64911	58.00	60001.00	63591.10	1.61	45.81	1.42	
Open Random Date transaction	523	24	4.59%	2869.47	22	64991	60.00	153.60	64409.72	0.59	16.82	0.53	
Open Random Page transaction	1286	58	4.51%	2802.43	26	64897	65.30	121.30	63702.56	1.50	42.96	1.31	
Open Random Post transaction	2396	122	5.09%	3140.63	22	64984	82.00	60001.00	63098.61	2.66	94.87	2.33	
Search by Name transaction	1481	78	5.27%	3256.83	22	64958	59.80	60001.00	63752.72	1.65	40.54	1.45	

2 Number of active threads graph

1-st condition

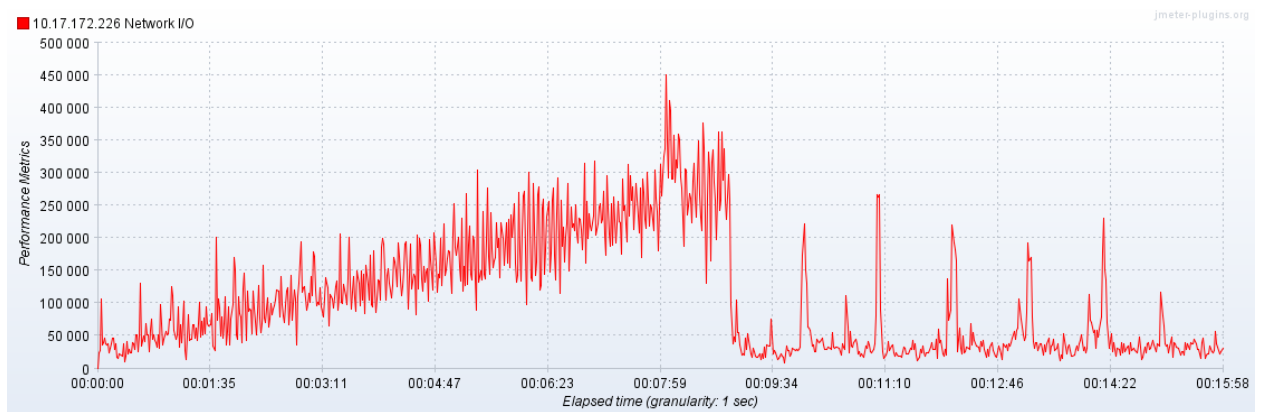
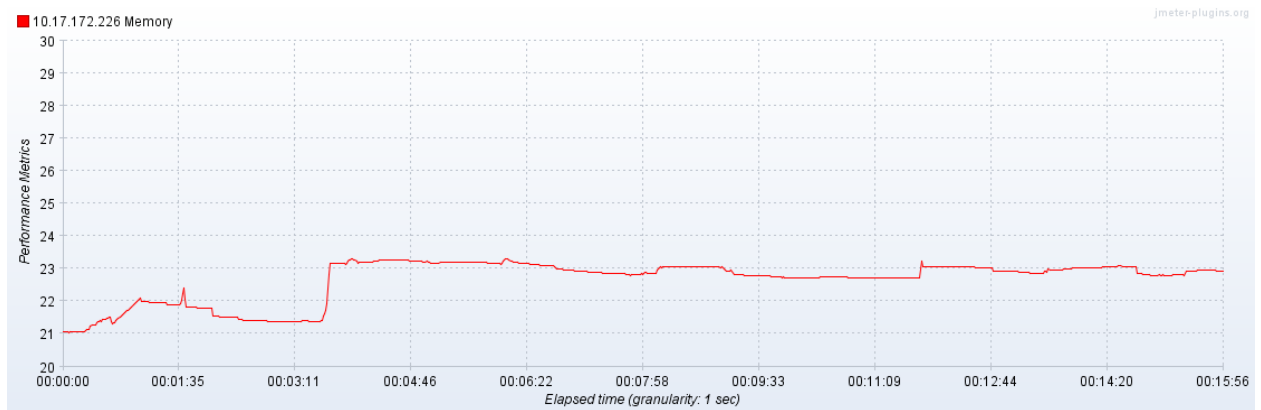
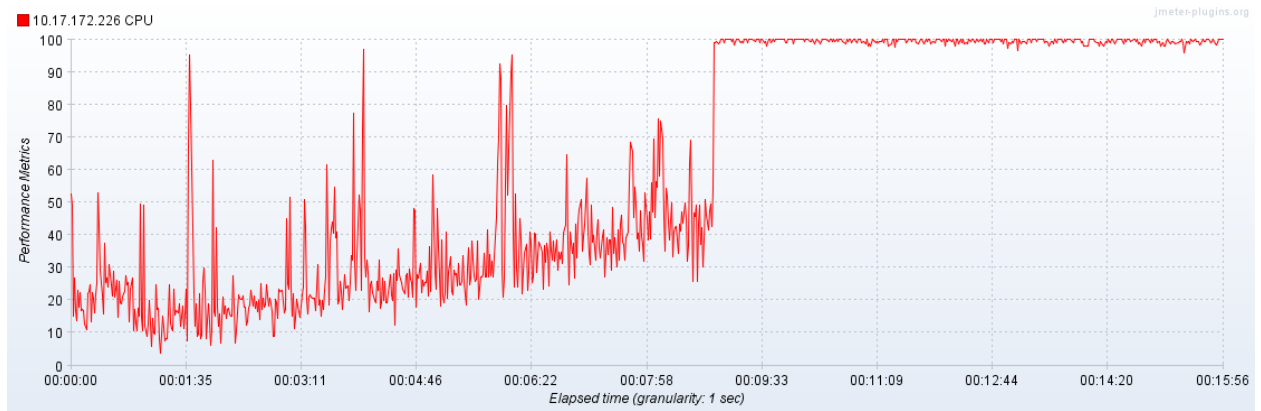


2-nd condition



3 PerfMon Metrics (CPU,Memory,Network) graphs

1-st condition



2-nd condition

