

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

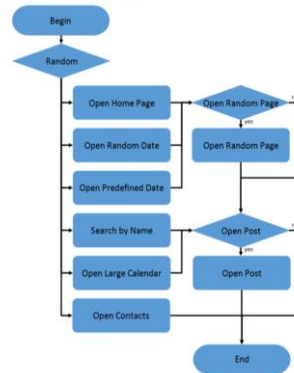
Test scenario

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

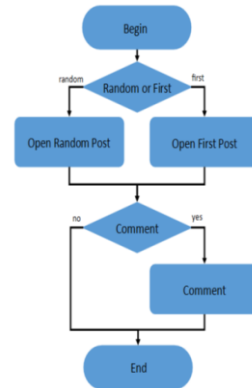
Main script



Anonymous script



Open Post script



Test conditions

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

Test Setup

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

Test Summary(100 vs 1000 posts for 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 132 users for the 1st scenario(100 posts). Saturation point is 86(1000 posts) for the 2nd scenario.
- 3 A memory leak was possible.

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.

4 Due to the use of probable percentages in the second case the load was greater and more real. A memory leak was possible, needed to set a limit on the number of requests for an open predefined date, search by name, open post and increase network resources.

5 Until the time of increasing resources, it is better to limit the number of posts.

Results: graphs and tables(1-st and 2-nd scenario, for more details open dashboard [HTMLReport > index](#))

1 Statistics

1-st scenario

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

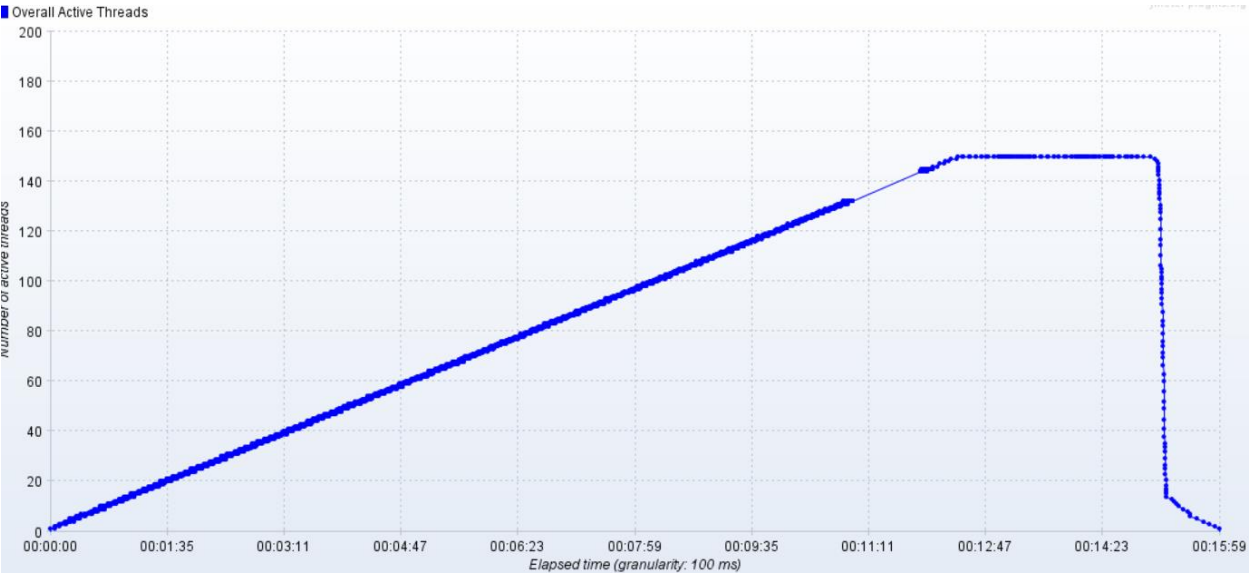
2-nd scenario

Statistics

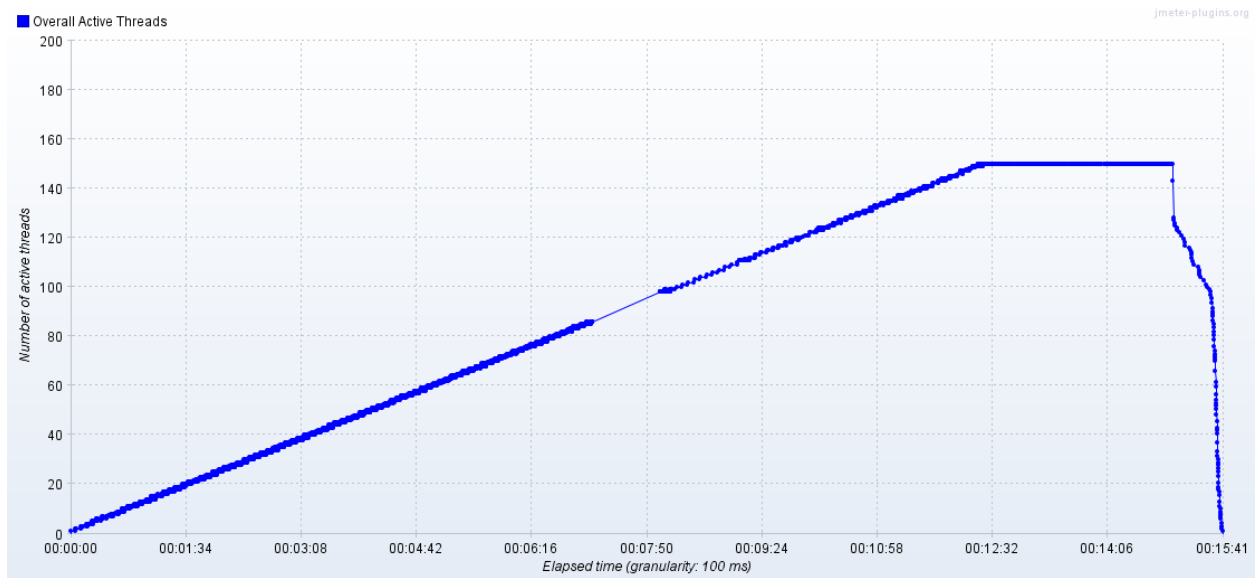
Requests	Executions				Response Times (ms)							Network (KB/sec)	
	Label	#Samples	KO	Error %	Average	Min	Max	90th pct	95th pct	99th pct	Throughput	Received	Sent
Total	5713	1230	21.53%	12099.48	6	64996	60002.00	60003.00	63837.62	6.09		140.83	5.03
Comment transaction	314	46	14.65%	8728.13	16	64828	60003.00	60003.00	64518.55	0.38		1.10	1.06
Go To Contact transaction	126	19	15.08%	9150.50	22	63798	60002.00	60002.00	63784.77	0.15		2.31	0.11
Go to log in page transaction	150	65	43.33%	26010.13	6	60005	60003.00	60003.00	60005.00	0.19		0.68	0.02
Go To Main Blog page transaction	150	67	44.67%	27031.48	35	64562	60002.00	63033.35	64492.13	0.16		2.93	0.08
Log in transaction	150	66	44.00%	26437.28	41	60003	60003.00	60003.00	60003.00	0.17		3.21	0.11
Open First Post transaction	659	91	13.81%	8431.97	30	64874	60002.00	60002.00	63960.80	0.75		18.42	0.60
Open Home Page transaction	361	59	16.34%	7937.00	33	64779	60001.00	60002.00	63228.74	0.40		10.28	0.30
Open Large Calendar transaction	238	35	14.71%	8273.84	66	64555	60002.00	60002.00	63993.73	0.27		17.85	0.21
Open Predefined Date transaction	749	146	19.49%	11501.16	26	64996	60002.00	60002.00	63563.50	0.81		20.54	0.60
Open Random Date transaction	250	39	15.60%	8054.68	25	64956	60002.00	60002.00	64818.52	0.28		7.24	0.22
Open Random Page transaction	570	88	15.44%	9300.63	27	64875	60002.00	60003.00	64115.57	0.65		16.76	0.51
Open Random Post transaction	1145	228	19.91%	10419.18	27	64949	60002.00	60002.00	64157.60	1.24		26.80	0.92
Search by Name transaction	701	131	18.69%	10514.56	29	64457	60002.00	60003.00	64079.00	0.76		17.67	0.57

2 Number of active threads graph

1-st scenario

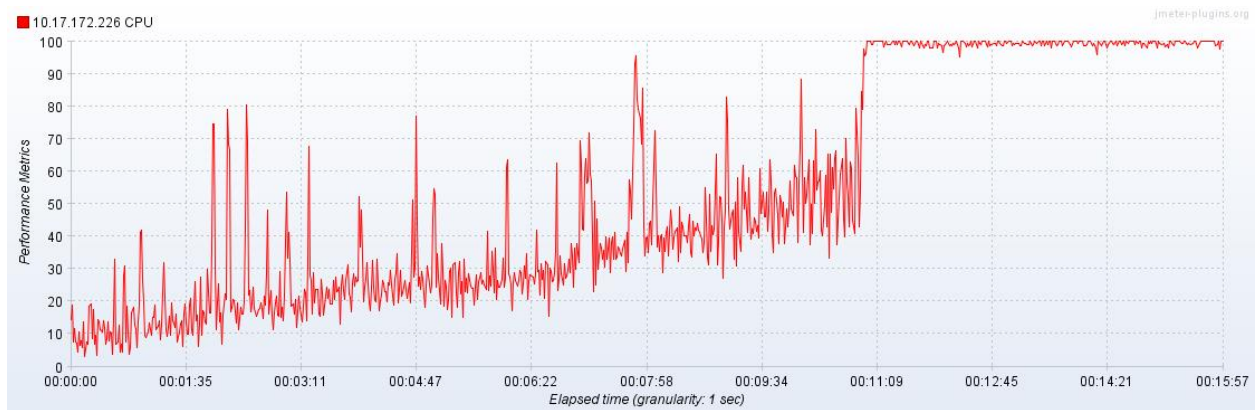


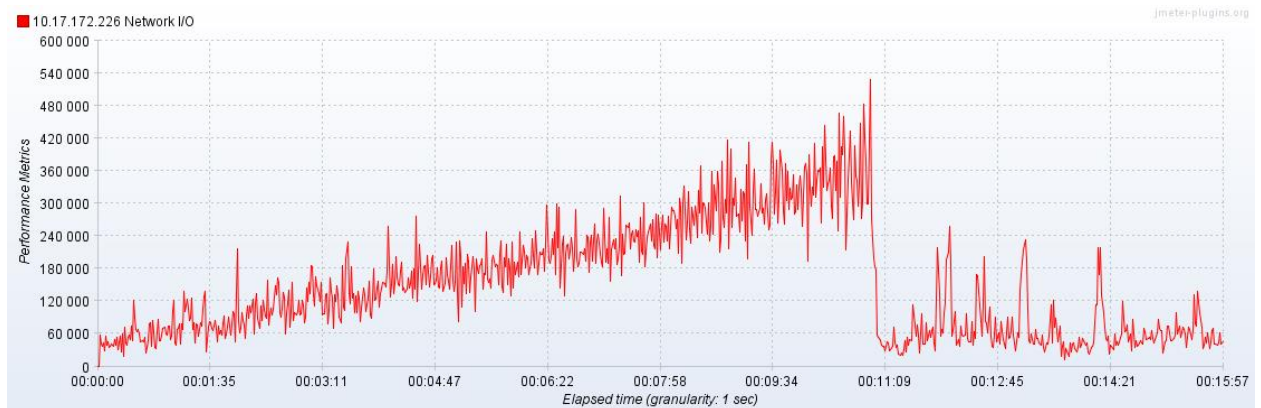
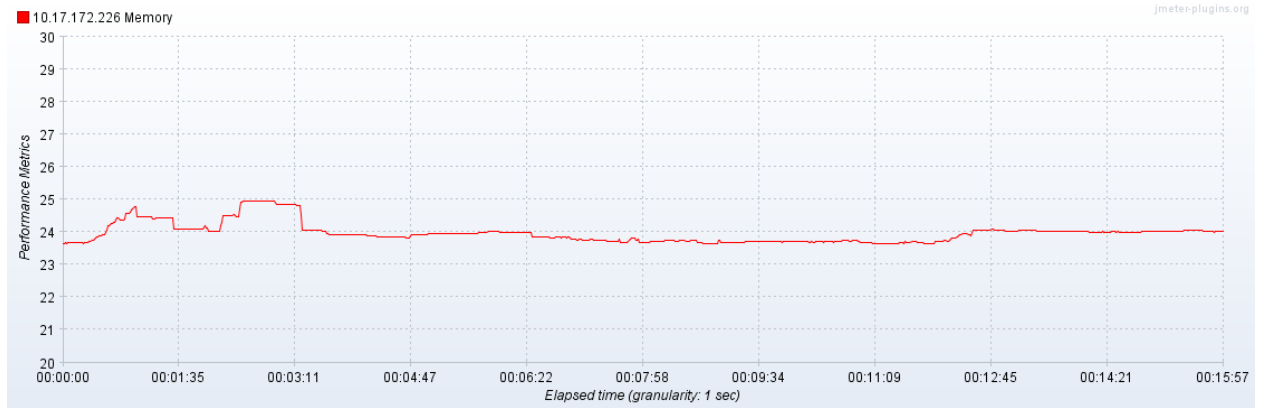
2-nd scenario



3 PerfMon Metrics (CPU,Memory,Network) graphs

1-st scenario





2-nd scenario

