1. Load model

VU	45
Ramp-up	90 sec
Duration	1200 sec

2. KPIs

Samples
Error %
Response time (Avg, Min, Max, Median, 90th pct, 95th pct, 99th pct)
CPU Avg
Memory Avg

3. Virtual machine memory

2000 posts = 7.87 Mb
1 post ~ 4 Kb

1 post with 1MB photo ~ 1024+4 Kb
The system has approximately 19 GB of free memory, so even if the blog becomes popular, it will be able to support almost 5 million posts or 19 thousand posts with photos. Therefore, it was decided not to increase the memory of the virtual machine.

4. VM's configurations

CPU/RAM	2 Gb	3 Gb	4 Gb
1	x		
2	x		
4	x	x	x

Unfortunately, when using 3 CPU and 6 CPU configuration, the virtual machine was unstable.

1) 1 CPU 2Gb RAM


General
General
General Information
Running Users
Total Requests
Passed Requests
Failed Requests
Error Rate
23890
23868
22
0.000921%


Summary
Response Time Percentiles
Response Time
Samples (Hits) / Second
Transactions/Second (Fail)


Transactions Response Times
Transactions Summary
Transactional Summary (All Response Time Details are in Seconds)

Samples	Error %	Response time, ms							CPU	RAM
		Avg	Min	Max	Median	90th pct	95th pct	99th pct		
23890	0.0921%	133	24	588	84	360	474	695	64%	83.97%

2) 2 CPU 2Gb RAM

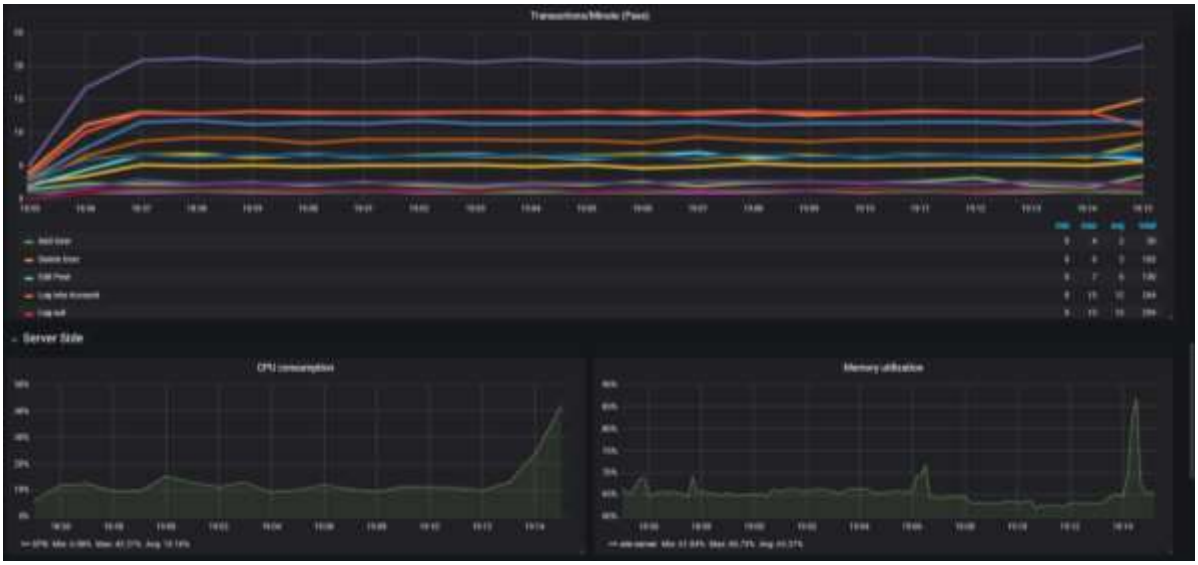
Samples	Error %	Response time, ms							CPU	RAM
		Avg	Min	Max	Median	90th pct	95th pct	99th pct		
24229	0.0289%	28	24	49	26	36	43	76	56.3%	83.23%

3) 4 CPU 2Gb RAM

Samples	Error %	Response time, ms							CPU	RAM
		Avg	Min	Max	Median	90th pct	95th pct	99th pct		

24306	0.05348%	16	6	640	9	40	53	88	27.61%	81.93%

4) 4 CPU 3Gb RAM



Samples	Error %	Response time, ms							CPU	RAM
		Avg	Min	Max	Median	90th pct	95th pct	99th pct		
24279	0%	10	7	48	8	17	23	53	13.16%	65.37%

5) 4 CPU 4Gb RAM

Samples	Error %	Response time, ms							CPU	RAM
		Avg	Min	Max	Median	90th pct	95th pct	99th pct		
24271	0.0247%	9	8	23	7	13	16	32	11.67%	25.99%

5. Calculating KPIs

Config	Samples	Error %	Response time, ms							CPU	RAM
			Avg	Min	Max	Median	90th pct	95th pct	99th pct		
1 CPU 2Gb RAM	23890	0.000921%	133	24	588	84	360	474	695	64%	83.97%

2 CPU 2Gb RAM	24229	0.000289%	28	24	49	26	36	43	76	56.3%	83.23%
4 CPU 2Gb RAM	24253	0.000536%	16	6	640	9	40	53	88	27.61%	81.93%
4 CPU 3Gb RAM	24279	0%	10	7	48	8	17	23	53	13.16%	65.37%
4 CPU 4Gb RAM	24271	0.000247%	9	8	23	7	13	16	32	11.67%	25.99%

Config	Samples	Error %	Response time, ms							CPU	RAM
			Avg	Min	Max	Median	90th pct	95th pct	99th pct		
1 CPU 2Gb RAM (baseline)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
2 CPU 2Gb RAM	1.4%	-69%	-79%	0%	-92%	-69%	-90%	-91%	-89%	-12%	-0.8%
4 CPU 2Gb RAM	1.5%	-42%	-88%	-75%	9%	-89%	-88%	-89%	-87%	-57%	-2.4%

Config	Samples	Error %	Response time, ms							CPU	RAM
			Avg	Min	Max	Median	90th pct	95th pct	99th pct		
4 CPU **2Gb** RAM (baseline)	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
4 CPU **3Gb** RAM	0.1%	-100%	-38%	17%	-93%	-11%	-56%	-57%	-40%	-52%	-20%
4 CPU **4Gb** RAM	0.07%	-54%	-44%	33%	-96%	-22%	-68%	-70%	-64%	-58%	-68%

The system behaves unstable and there is no pronounced linear dependence between the indicators. So, unfortunately, it is impossible to define multiplier for scaling CPU or RAM.