



PERFORMANCE TESTING

US 011, 013, 019, 020 and 025

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Throughout the whole project I've been in charge of the following US:

- 011 Homeless pets' management
- 013 Vet management
- 019 Trainer management
- 020 Unregistered users can see trainers
- 025 Trainers can see pet's visits

Having reached this stage of the project, performance testing was being needed to see what are the basic flaws of the system. The data obtained from these test is summed in the next table but we'll get into details US by US after.

US # and description	Stress test	Load test
US 011 Homeless pets management	85000	250
US 013 Vet management	80000	1500
US 019 Trainer management	80000	3000
US 020 Unregistered users can see trainers	100000	14000
US 025 Trainers can see pet's visits	80000	2000

US 011 – Homeless pets' management

The system performance (CPU + RAM) is detailed through the next screenshots:

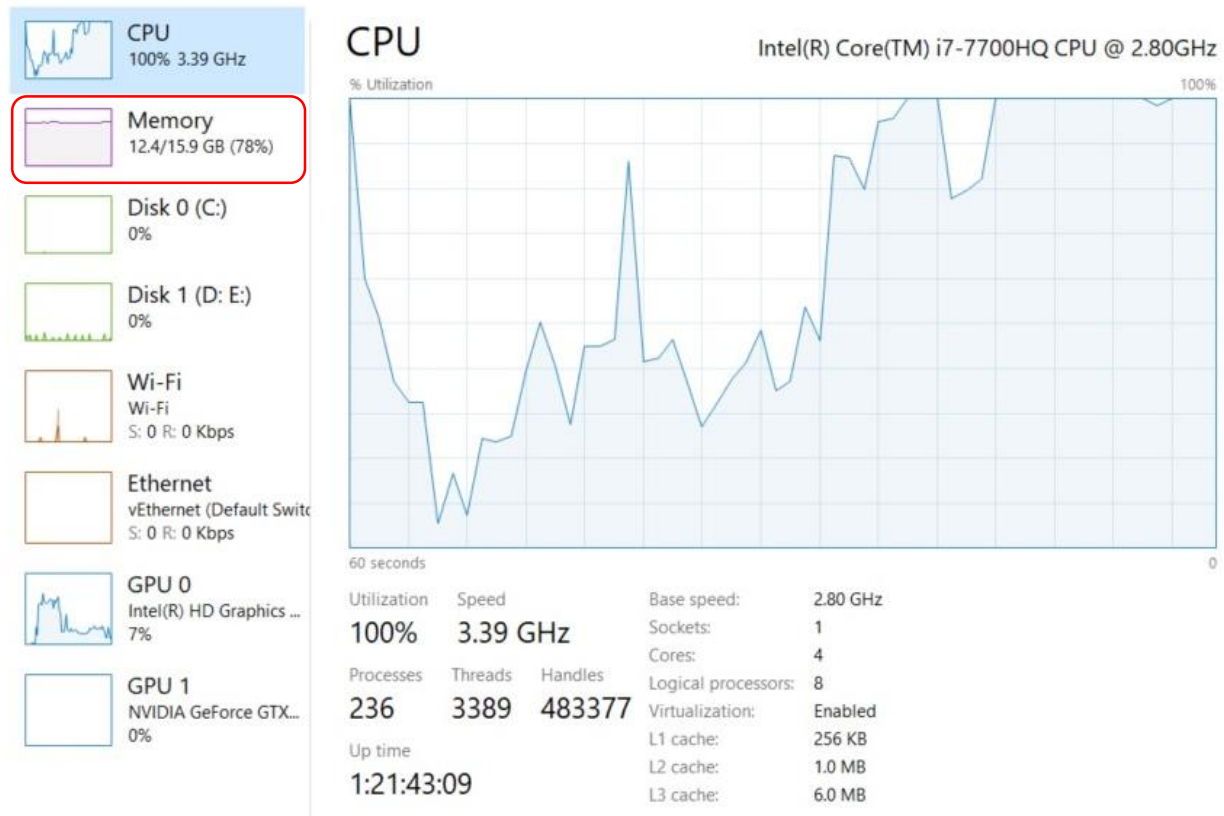


Figure 1 US 011 Bottleneck

The CPU would remain like this until the script finished, as it's shown in the next one:

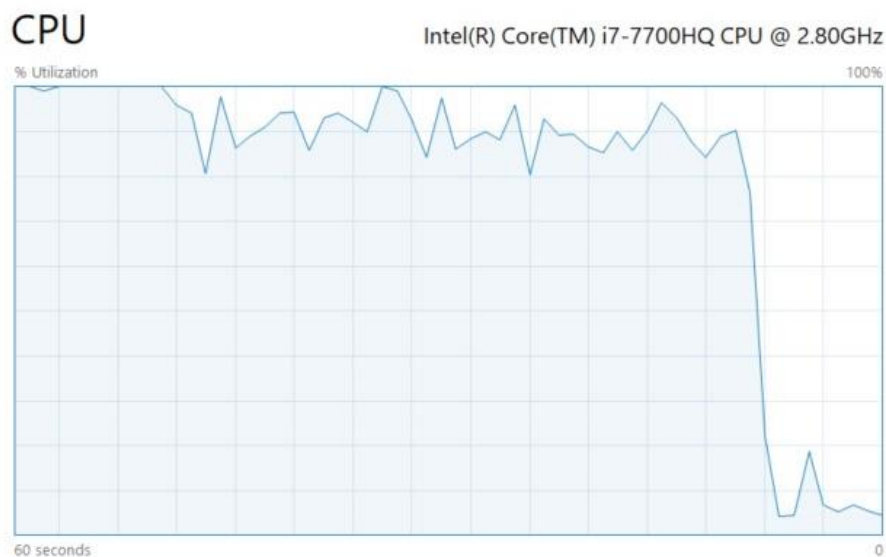


Figure 2 US 011 CPU after finishing

Regarding the load test, the Gatling report we obtain is the following:

> Global Information



Figure 3 US 011 Global information Load test

STATISTICS						Expand all groups Collapse all groups							
Requests ^	🔄 Executions					🕒 Response Time (ms)							
	Total ↕	OK ↕	KO ↕	% KO ↕	Cnt/s ↕	Min ↕	50th pct ↕	75th pct ↕	95th pct ↕	99th pct ↕	Max ↕	Mean ↕	Std Dev ↕
Global Information	4088	4009	79	2%	11.849	0	562	19732	32806	46787	60002	10026	13769
Home	500	500	0	0%	1.449	2	6	10	8376	10068	10229	1235	2720
Login	500	500	0	0%	1.449	0	2	3	8449	10015	10530	956	2406
Logged	500	500	0	0%	1.449	4	19798	30004	44588	55939	56337	18950	14930
Logged Redirect 1	500	500	0	0%	1.449	0	3	708	4002	6180	15247	846	1893
ListHomelessPets	500	497	3	1%	1.449	1	30004	30027	46579	56501	60002	24131	15790
Homeless...Positive	250	227	23	9%	0.725	1	18230	29054	30006	32524	35920	17137	11121
Homeless...Negative	250	235	15	6%	0.725	1	17596	28934	30004	31351	39129	15695	11310
ListHome...direct 1	151	151	0	0%	0.438	0	1	2	207	209	209	42	78
HomelessPetCreated	250	227	23	9%	0.725	0	3106	17088	33034	39003	47746	10848	12966
Homeless...rMessage	250	235	15	6%	0.725	0	3163	19792	32966	35513	42492	10977	12859
Homeless...direct 1	72	72	0	0%	0.209	0	2073	2408	3112	3136	3140	1393	1200
Homeless...direct 1	79	79	0	0%	0.229	0	537	2405	3113	3136	3138	1123	1180
Homeless...direct 1	207	207	0	0%	0.6	0	30003	30006	38934	45731	48687	19655	15217
Homeless...direct 1	79	79	0	0%	0.229	0	1	2	7	8	9	2	2

Figure 4 US 011 Load test details

US 013 – Vet management

The system performance (CPU + RAM) is detailed through the next screenshots:

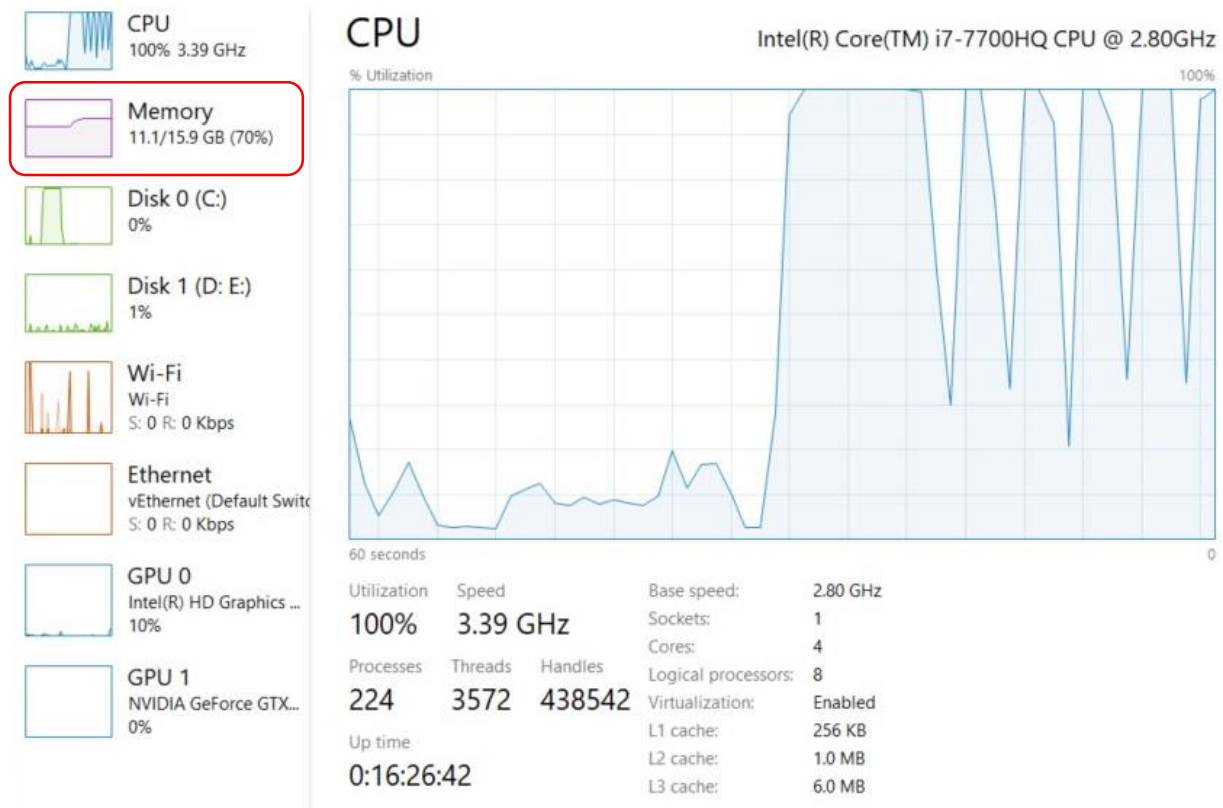


Figure 5 US 013 Bottleneck

The CPU would remain like this until the script finished, as it's shown in the next one:

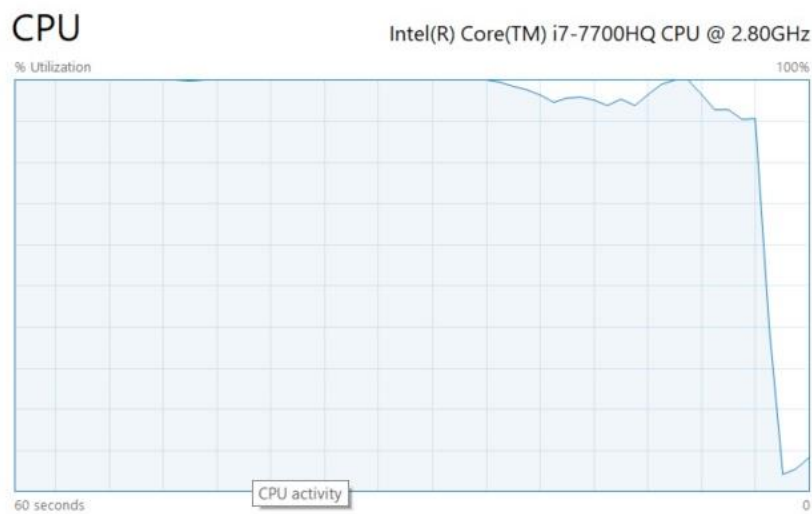


Figure 6 US 013 CPU after finishing

Regarding the load test, the Gatling report we obtain is the following:

> **Global Information**

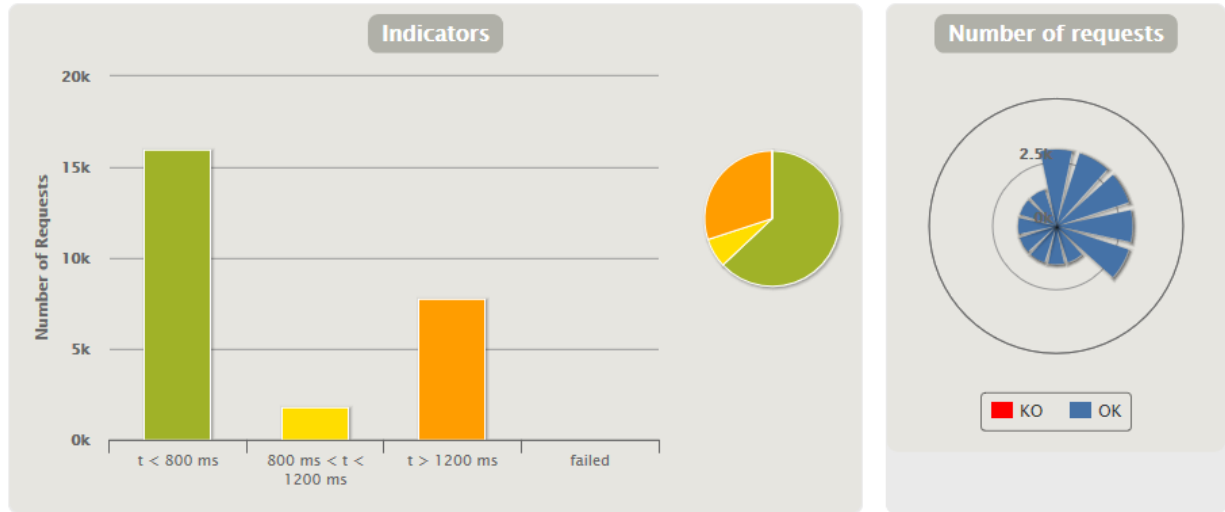


Figure 7 US 013 Global information Load test

STATISTICS										Expand all groups Collapse all groups				
Requests ^	Executions					Response Time (ms)								
	Total ↕	OK ↕	KO ↕	% KO ↕	Cnt/s ↕	Min ↕	50th pct ↕	75th pct ↕	95th pct ↕	99th pct ↕	Max ↕	Mean ↕	Std Dev ↕	
Global Information	25500	25500	0	0%	122.596	0	116	1619	3128	4265	8150	889	1196	
Home	3000	3000	0	0%	14.423	2	4	6	1107	1232	1291	145	349	
Login	3000	3000	0	0%	14.423	0	2	3	1236	1615	1792	214	447	
Logged	3000	3000	0	0%	14.423	2	204	2079	3499	4655	8150	980	1279	
Logged Redirect 1	3000	3000	0	0%	14.423	1	3	1089	1579	1750	1800	408	601	
ListVets	3000	3000	0	0%	14.423	55	701	2609	3558	4718	6608	1347	1345	
ShowVetJamesCarter	1500	1500	0	0%	7.212	22	748	2432	3489	4730	7427	1279	1310	
ShowVetTestDummy	1500	1500	0	0%	7.212	11	759	2391	3285	4586	6380	1230	1276	
ShowVetT...ummyForm	1500	1500	0	0%	7.212	12	768	2393	3321	4212	6433	1241	1252	
ShowVetJ...rterForm	1500	1500	0	0%	7.212	22	867	2457	3464	4629	7116	1316	1298	
VetTestDummyUpdated	1500	1500	0	0%	7.212	13	646	2431	3538	4591	6052	1261	1345	
VetTestD...direct 1	1500	1500	0	0%	7.212	50	715	2555	3542	4724	7600	1339	1365	
ShowVetJ...rMessage	1500	1500	0	0%	7.212	7	710	2417	3505	4778	6237	1256	1350	

Figure 8 US 013 Load test details

US 019 – Trainer management

The system performance (CPU + RAM) is detailed through the next screenshots:

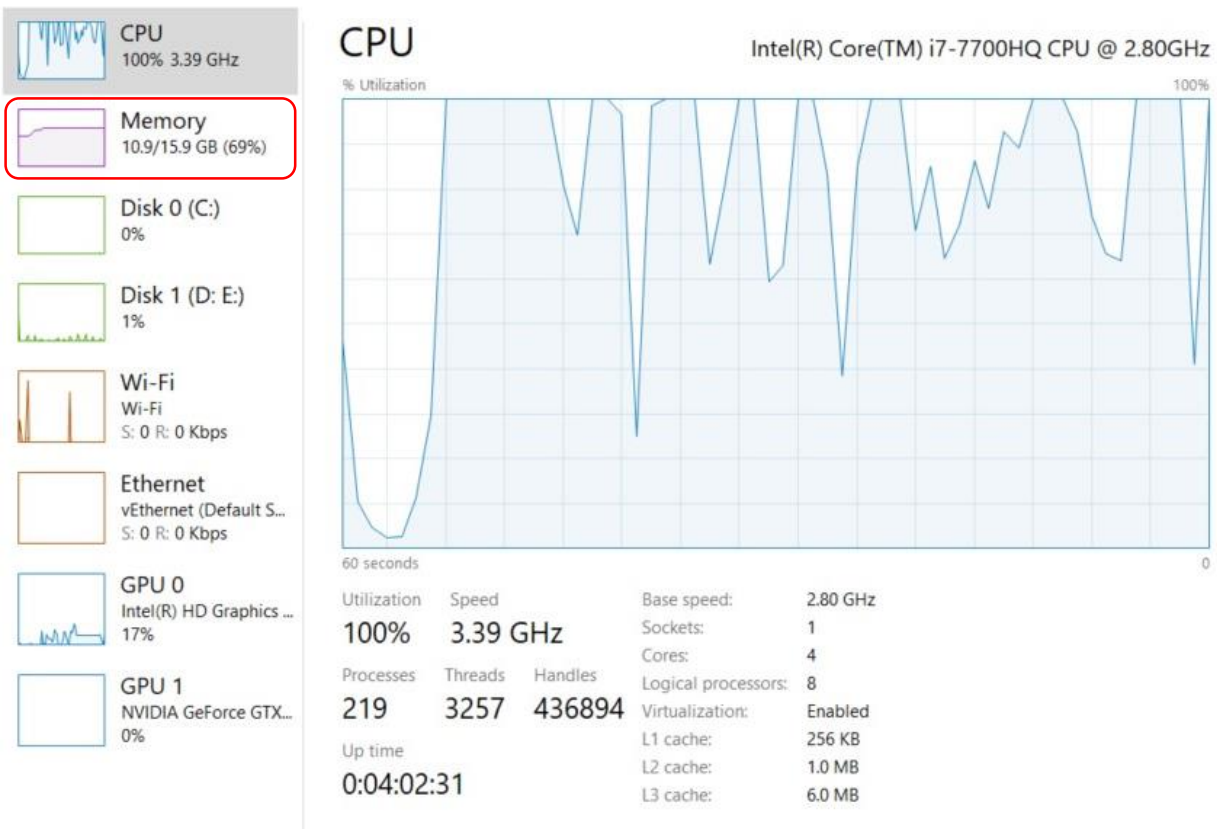


Figure 9 US 019 Bottleneck

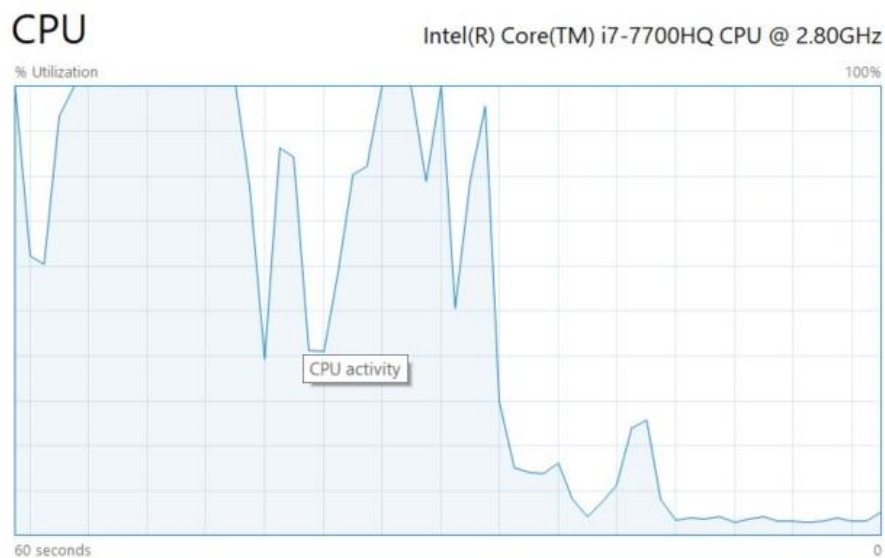


Figure 10 US 019 after finishing

Regarding the load test, the Gatling report we obtain is the following:

> **Global Information**

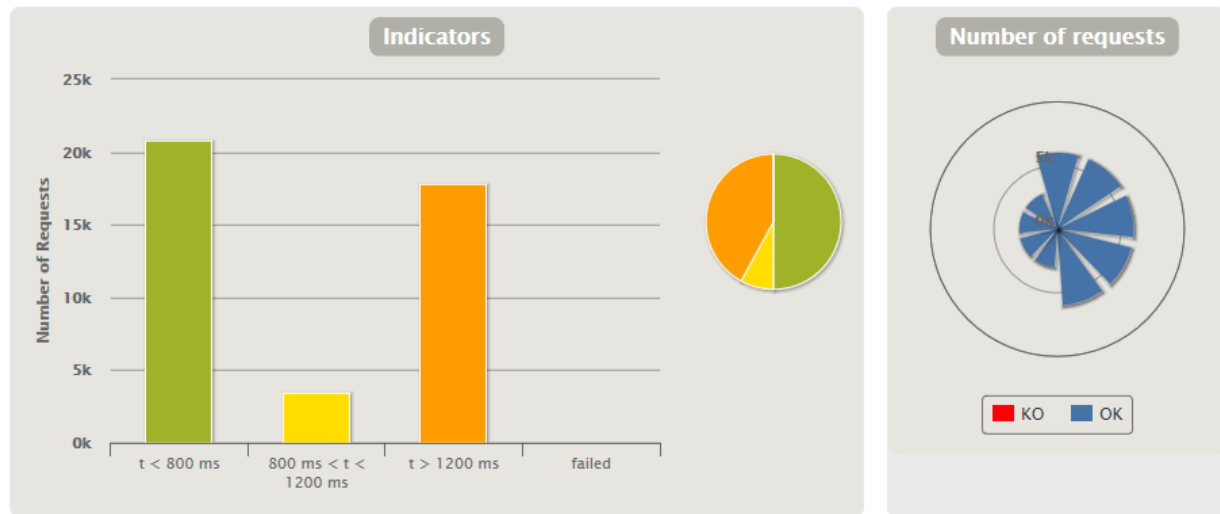


Figure 11 US 019 Global information Load test

▶ STATISTICS						Expand all groups Collapse all groups							
Requests ^	🔄 Executions					🕒 Response Time (ms)							
	Total ↕	OK ↕	KO ↕	% KO ↕	Cnt/s ↕	Min ↕	50th pct ↕	75th pct ↕	95th pct ↕	99th pct ↕	Max ↕	Mean ↕	Std Dev ↕
Global Information	42000	42000	0	0%	217.617	0	821	2053	3544	4414	8418	1152	1270
Home	6000	6000	0	0%	31.088	1	6	1130	2348	2824	2931	584	808
Login	6000	6000	0	0%	31.088	0	5	1150	2180	2690	2937	596	769
Logged	6000	6000	0	0%	31.088	2	1145	2405	3776	4952	7763	1366	1396
Logged Redirect 1	6000	6000	0	0%	31.088	1	580	1610	2637	2909	3036	871	937
ListTrainers	6000	6000	0	0%	31.088	16	1386	2496	3710	4641	8418	1480	1349
ShowTrainerJohnDoe	3000	3000	0	0%	15.544	14	1678	2926	3974	4897	8265	1668	1456
ShowTrai...omasMoon	3000	3000	0	0%	15.544	5	1658	2866	3849	4873	7745	1635	1440
TrainerNotDeleted	3000	3000	0	0%	15.544	19	1348	2578	3794	4699	7489	1486	1398
TrainerD...essfully	3000	3000	0	0%	15.544	19	1388	2770	3998	5132	7084	1551	1473

Figure 12 US 019 Load test details

US 020 – Unregistered users can see trainers

The system performance (CPU + RAM) is detailed through the next screenshots:

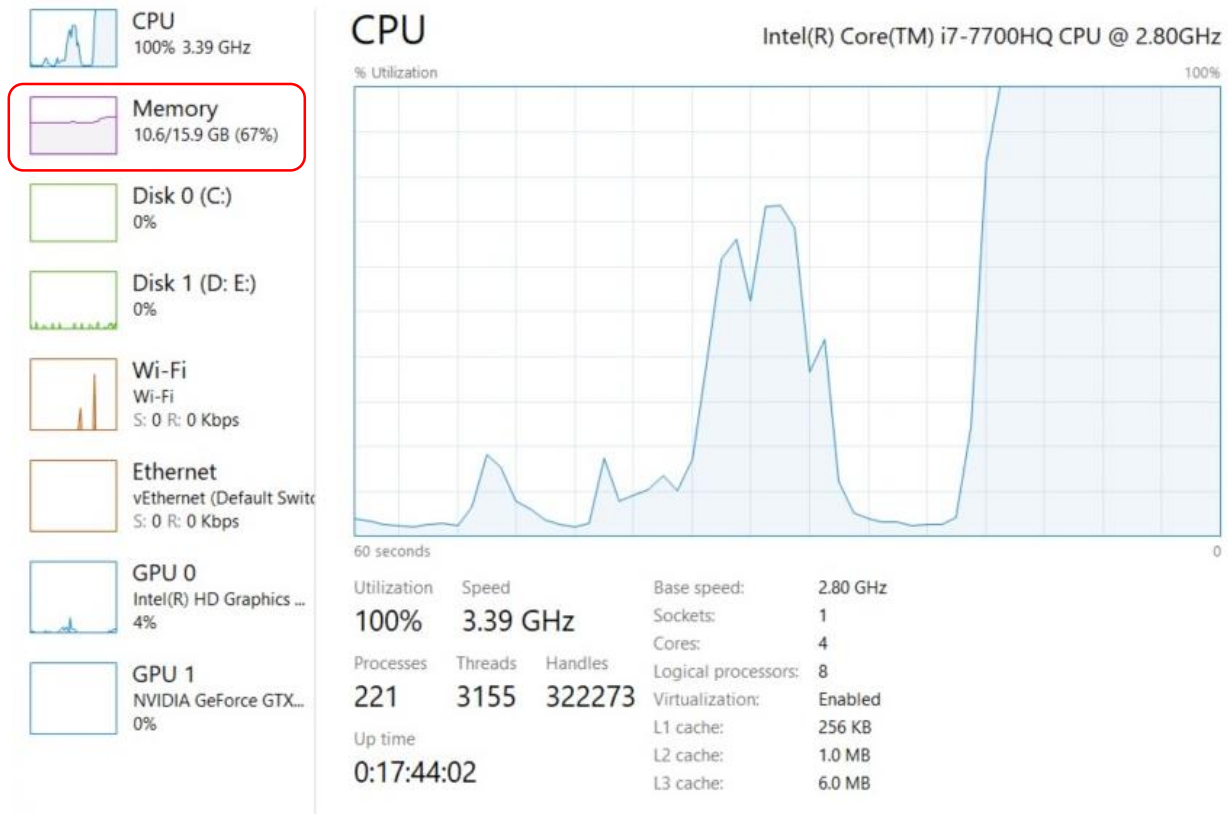


Figure 13 US 020 Bottleneck

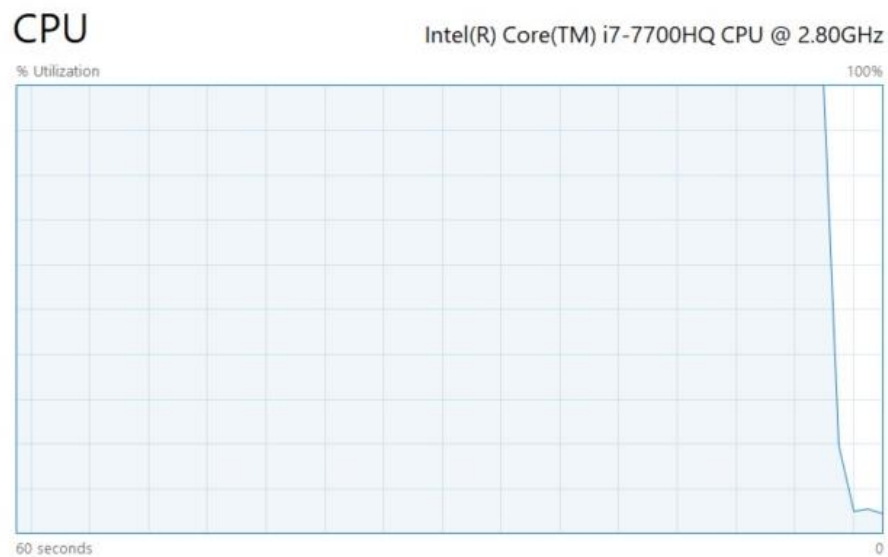


Figure 14 US 020 CPU after finishing

Regarding the load test, the Gatling report we obtain is the following:

➤ **Global Information**

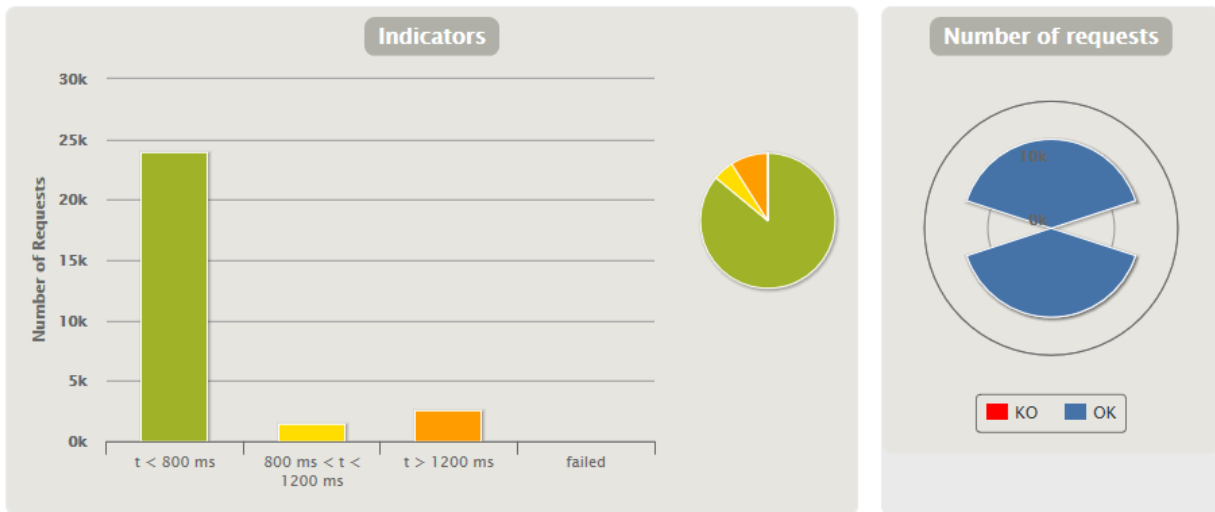


Figure 15 US 020 Global information Load test

STATISTICS														Expand all groups Collapse all groups	
Requests ^	Executions					Response Time (ms)									
	Total ↕	OK ↕	KO ↕	% KO ↕	Cnt/s ↕	Min ↕	50th pct ↕	75th pct ↕	95th pct ↕	99th pct ↕	Max ↕	Mean ↕	Std Dev ↕		
Global Information	28000	28000	0	0%	250	1	31	348	1880	2618	5337	332	637		
Home	14000	14000	0	0%	125	1	4	5	947	1209	1305	110	291		
ListTrainers	14000	14000	0	0%	125	19	132	678	2484	2878	5337	553	794		

Figure 16 US 020 Load test details

US 025 – Trainers can see pets' visits

The system performance (CPU + RAM) is detailed through the next screenshots:

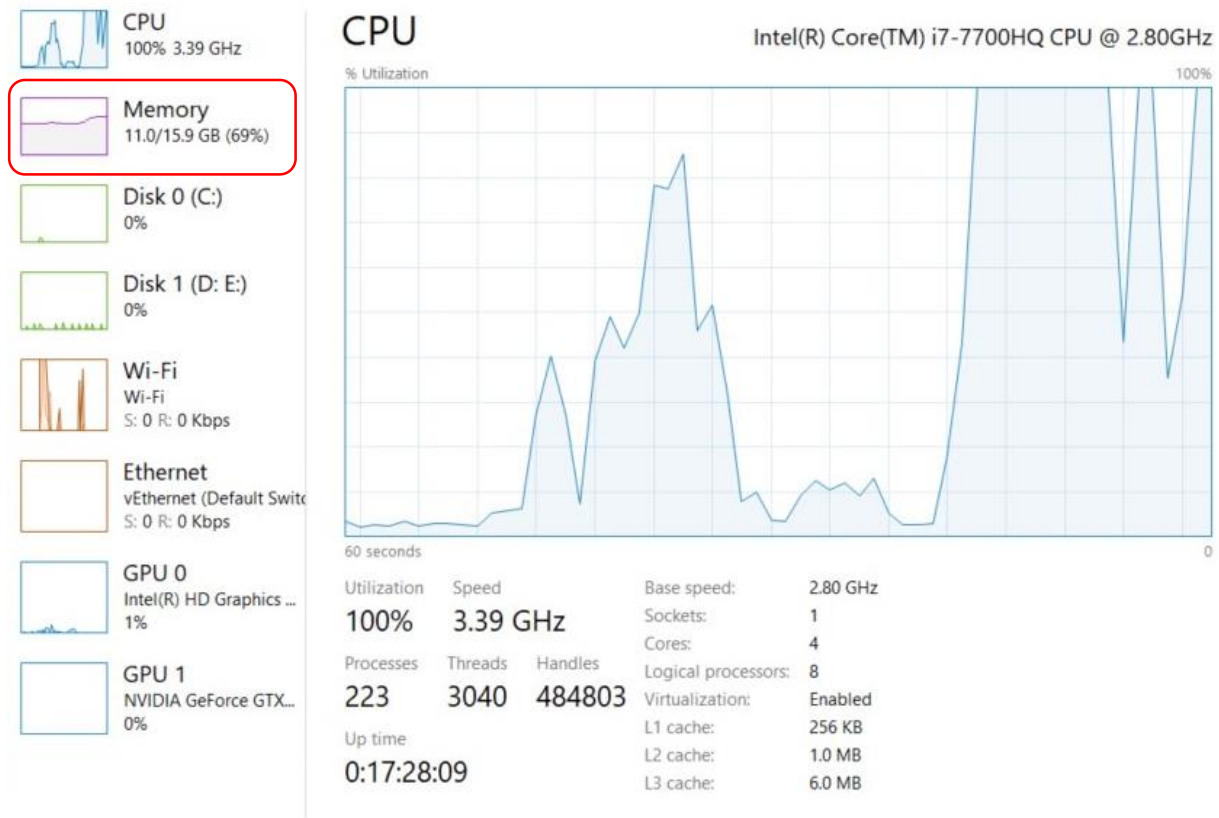


Figure 17 US 025 Bottleneck

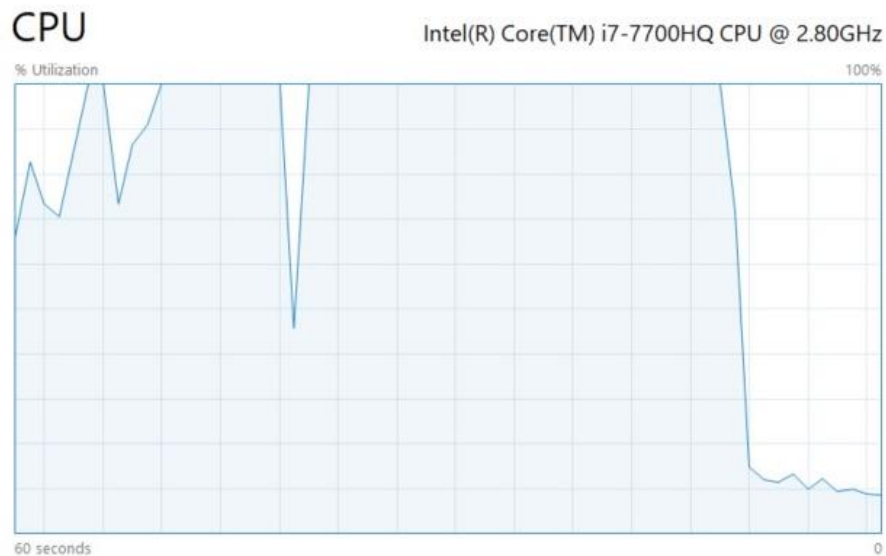


Figure 18 US 025 CPU after finishing

Regarding the load test, the Gatling report we obtain is the following:

> Global Information

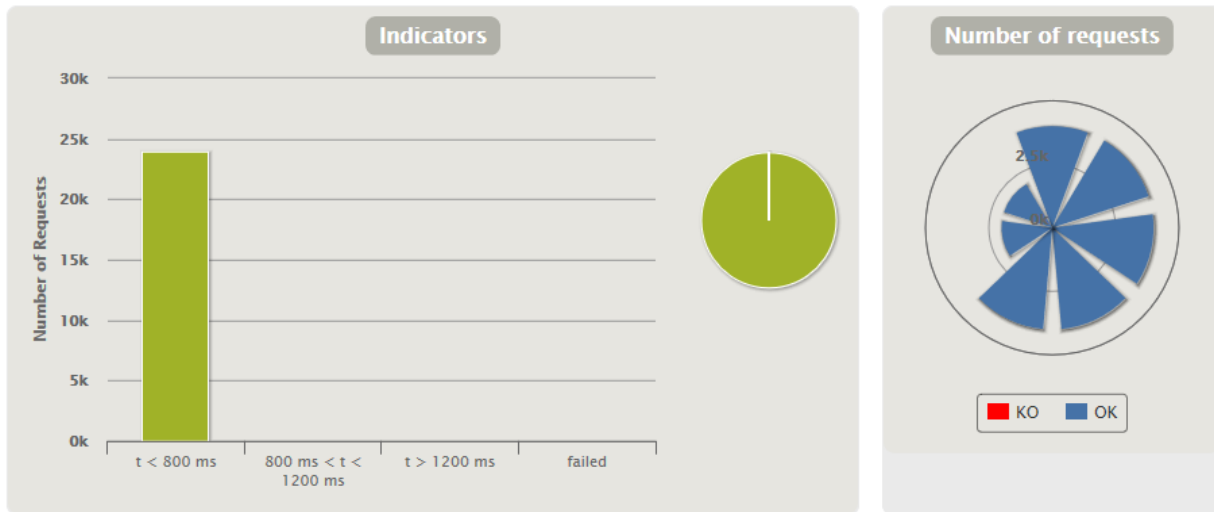


Figure 19 US 025 Global information Load test

STATISTICS														Expand all groups Collapse all groups	
Requests ^	Executions					Response Time (ms)									
	Total ↕	OK ↕	KO ↕	% KO ↕	Cnt/s ↕	Min ↕	50th pct ↕	75th pct ↕	95th pct ↕	99th pct ↕	Max ↕	Mean ↕	Std Dev ↕		
Global Information	24000	24000	0	0%	150.943	0	4	31	126	459	1837	31	88		
Home	4000	4000	0	0%	25.157	2	3	4	6	9	62	4	2		
Login	4000	4000	0	0%	25.157	0	1	2	3	6	125	2	3		
Logged	4000	4000	0	0%	25.157	2	5	7	156	610	1542	31	110		
Logged Redirect 1	4000	4000	0	0%	25.157	1	3	3	4	6	17	3	1		
ListHomelessPets	4000	4000	0	0%	25.157	29	42	61	285	707	1837	84	126		
ShowHome...etVisits	2000	2000	0	0%	12.579	21	32	44	234	693	1183	67	115		
ShowNoHo...etVisits	2000	2000	0	0%	12.579	13	21	30	204	636	1269	52	109		

Figure 20 US 025 Load test details

As a conclusion of all these tests, I can say that we would have to improve mostly the CPU and in some cases the memory but it's not that big of an issue like the CPU.