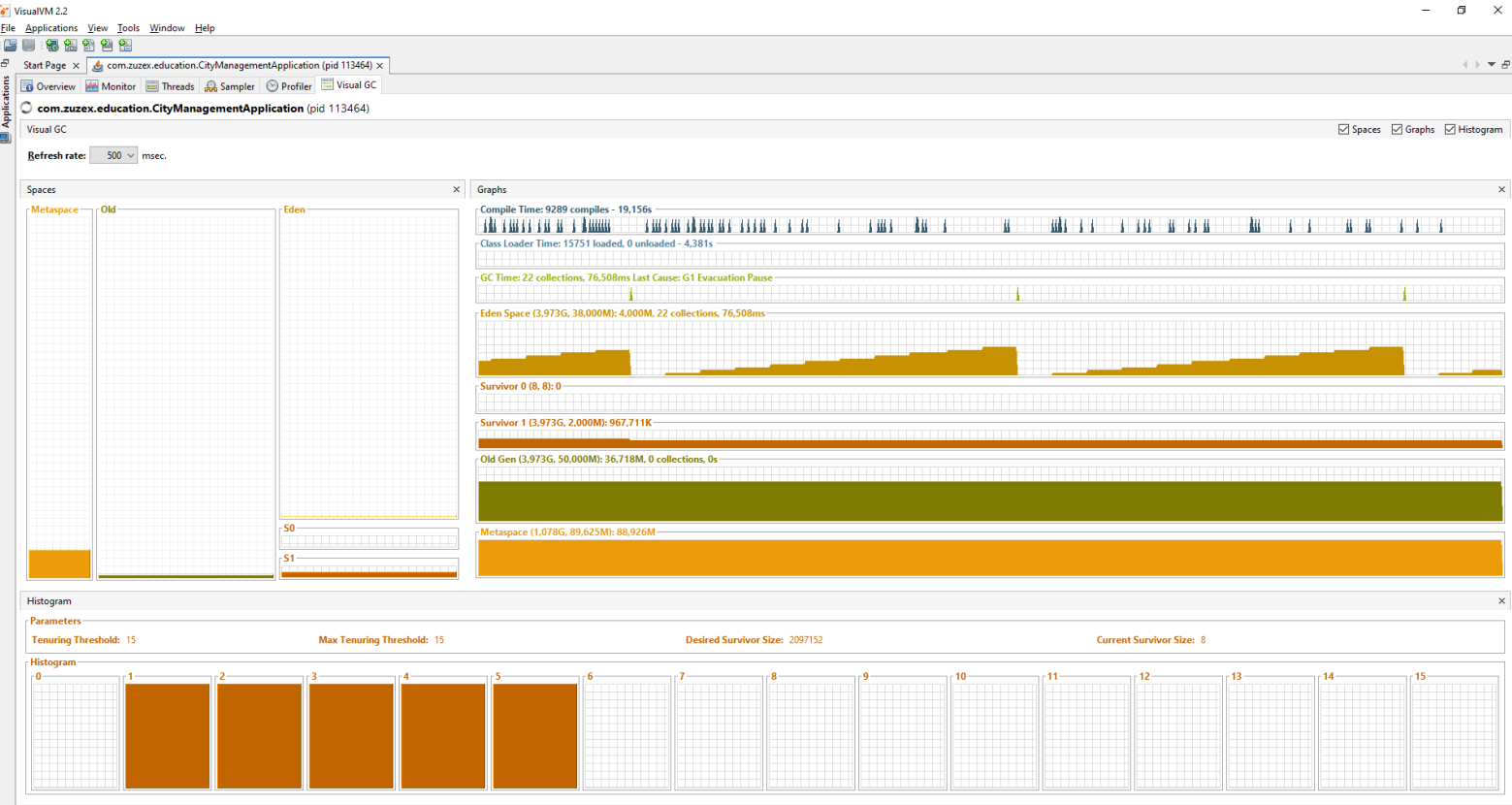
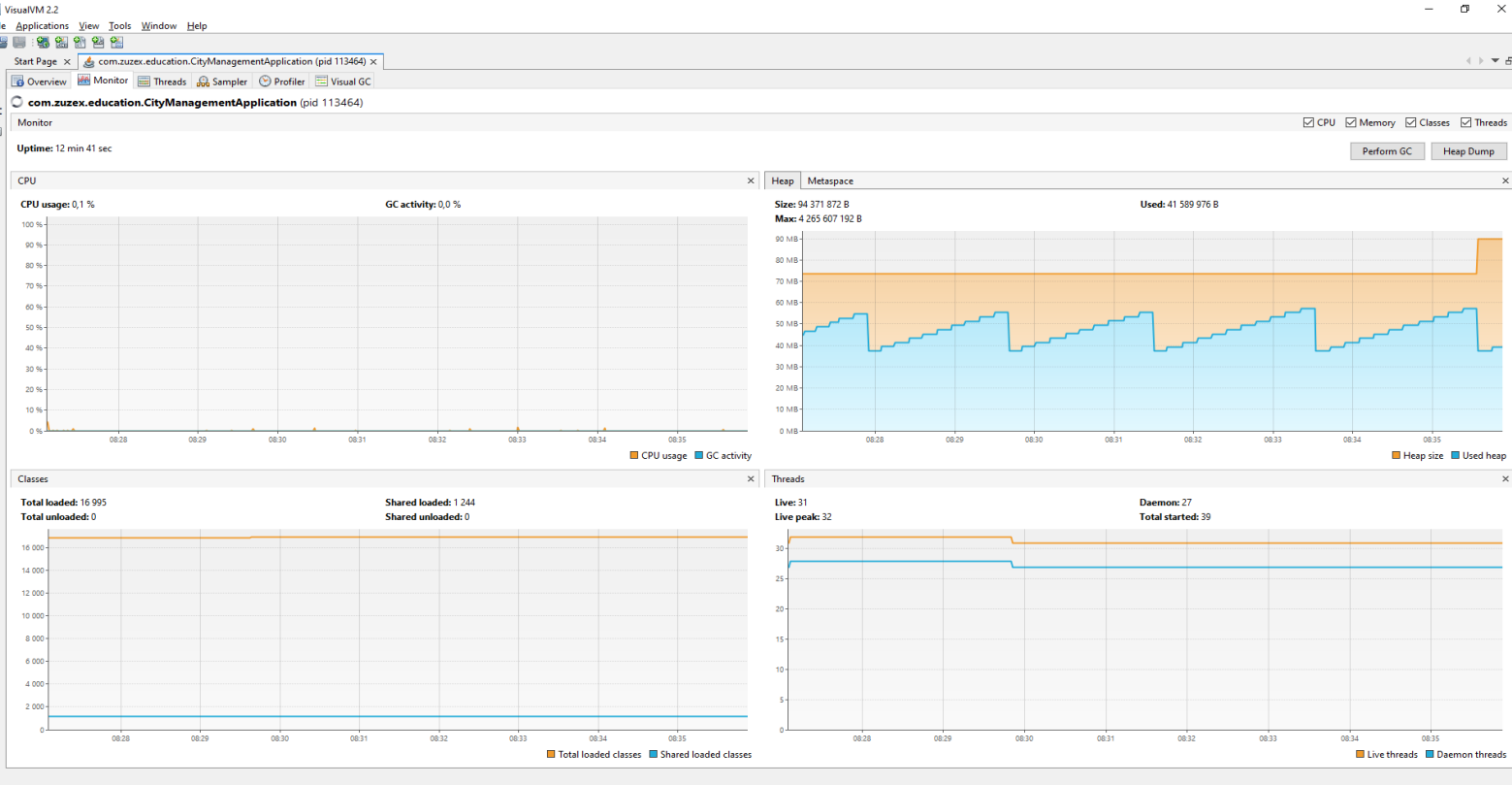
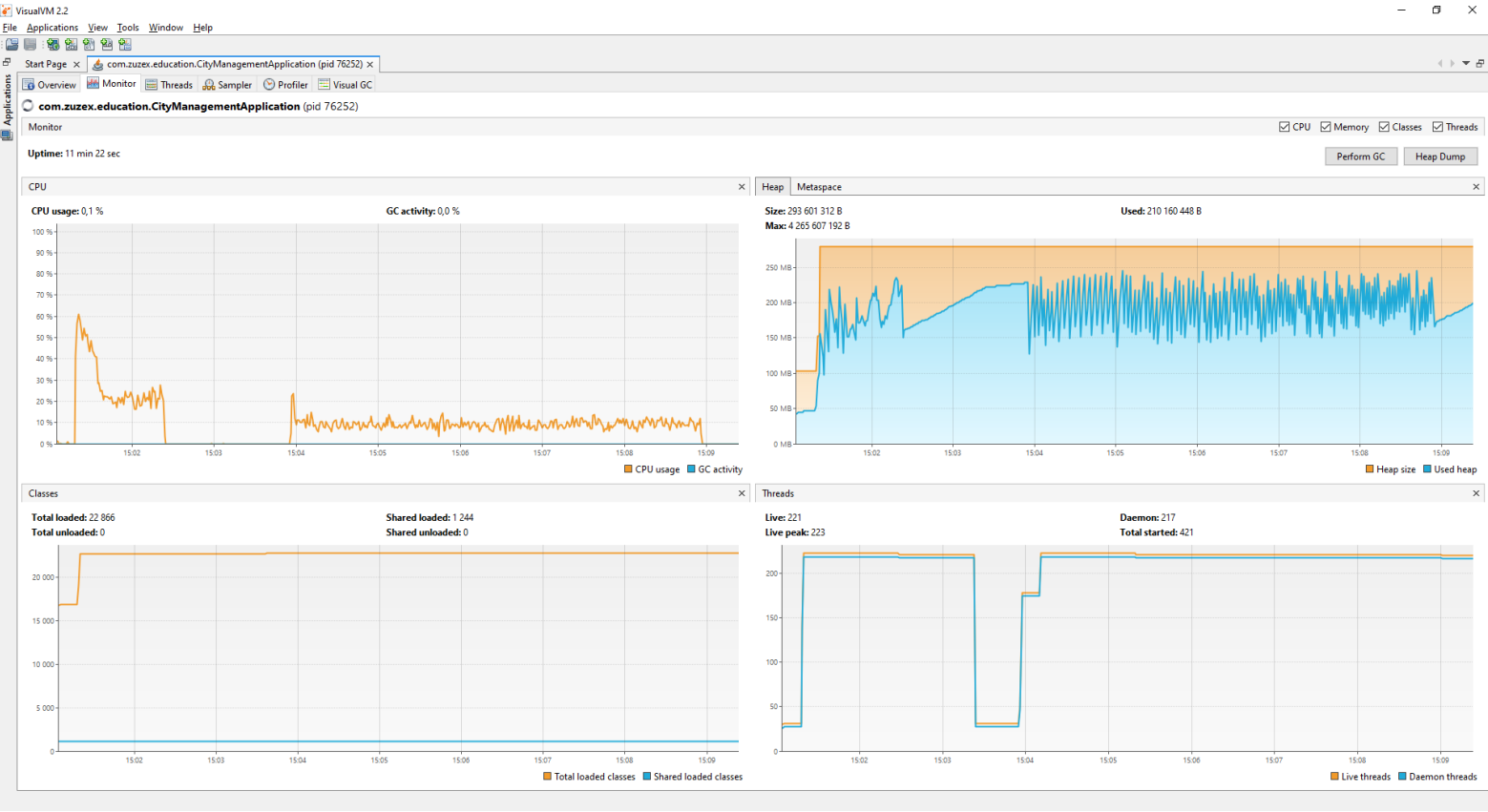
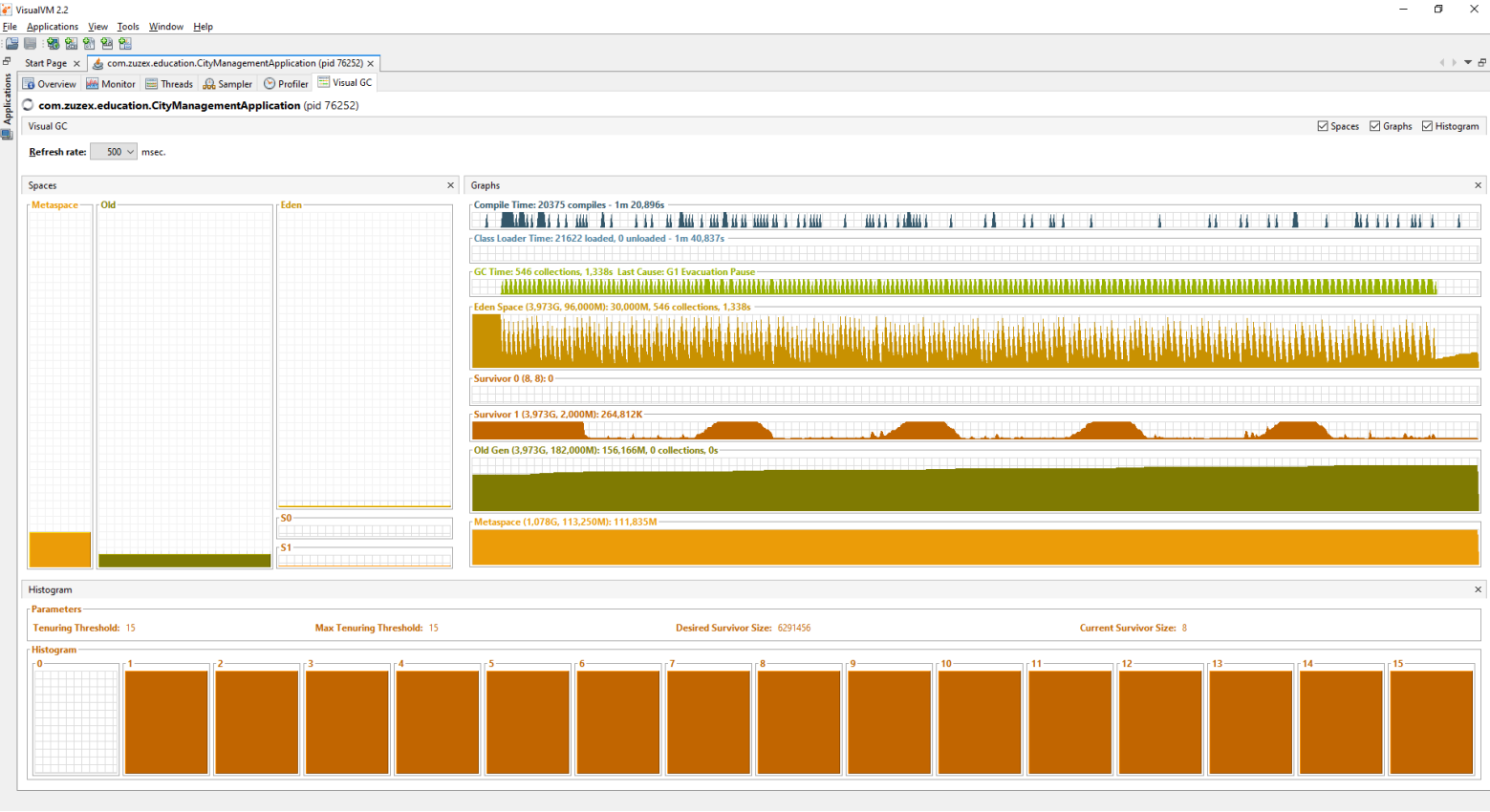


1) В простое



2) Под обычной нагрузкой (3000 threads, ramp up 20, loop inf, duration 5 min, timer 180000 req/min)

Потребление памяти в пределах 250 МБ, CPU не более 15%. 99 перцентиль равен 31 мс, RPS равен 3008.



City Management Normal test plan.jmx (C:\Program Files\apache-jmeter-5.6.3\bin\tests\CityManagement\City Management Normal test plan.jmx) - Apache JMeter (5.6.3)

FileEditSearchRunOptionsToolsHelp

00:04:5900/3000

City management Stress test plan

STRESS Thread Group

Constant Throughput Timer

POST Create house w/ address

GET Get address

GET Get house

POST Create person w/ passport

POST Create car

GET Get person

GET Get passport

GET Get car

View Results Tree

Aggregate Report

Aggregate Report

Name:Aggregate Report

Comments:

Write results to file / Read from file

FilenameC:\Program Files\apache-jmeter-5.6.3\bin\tests\CityManagement\stab test results\stress_mode\2aggregate_report.jmxBrowse...Log/Display Only:☐ Errors☐ SuccessesConfigure

Label	# Samples	Average	Median	90% Line	95% Line	99% Line	Min	Maximum	Error %	Throughput	Received KB/...	Sent KB/sec
POST Create...	114025	6	4	10	20	37	2	160	0.00%	380.1/sec	148.09	126.93
GET Get add...	113678	2	1	3	10	28	0	169	0.00%	378.9/sec	103.61	63.28
GET Get house	113331	2	1	2	8	27	0	154	0.00%	377.8/sec	124.33	61.98
POST Create...	113040	6	4	11	20	36	2	155	0.00%	376.8/sec	166.31	156.39
POST Create...	112776	3	2	6	14	31	1	175	0.00%	375.9/sec	117.11	111.24
GET Get pers...	112511	2	1	2	9	28	0	129	0.00%	375.1/sec	96.33	61.53
GET Get pass...	111846	2	1	2	8	27	0	134	0.00%	372.8/sec	146.73	62.26
GET Get car	111406	2	1	2	7	26	0	132	0.00%	371.4/sec	115.69	60.20
TOTAL	902613	3	2	6	13	31	0	175	0.00%	3008.4/sec	1018.10	703.74

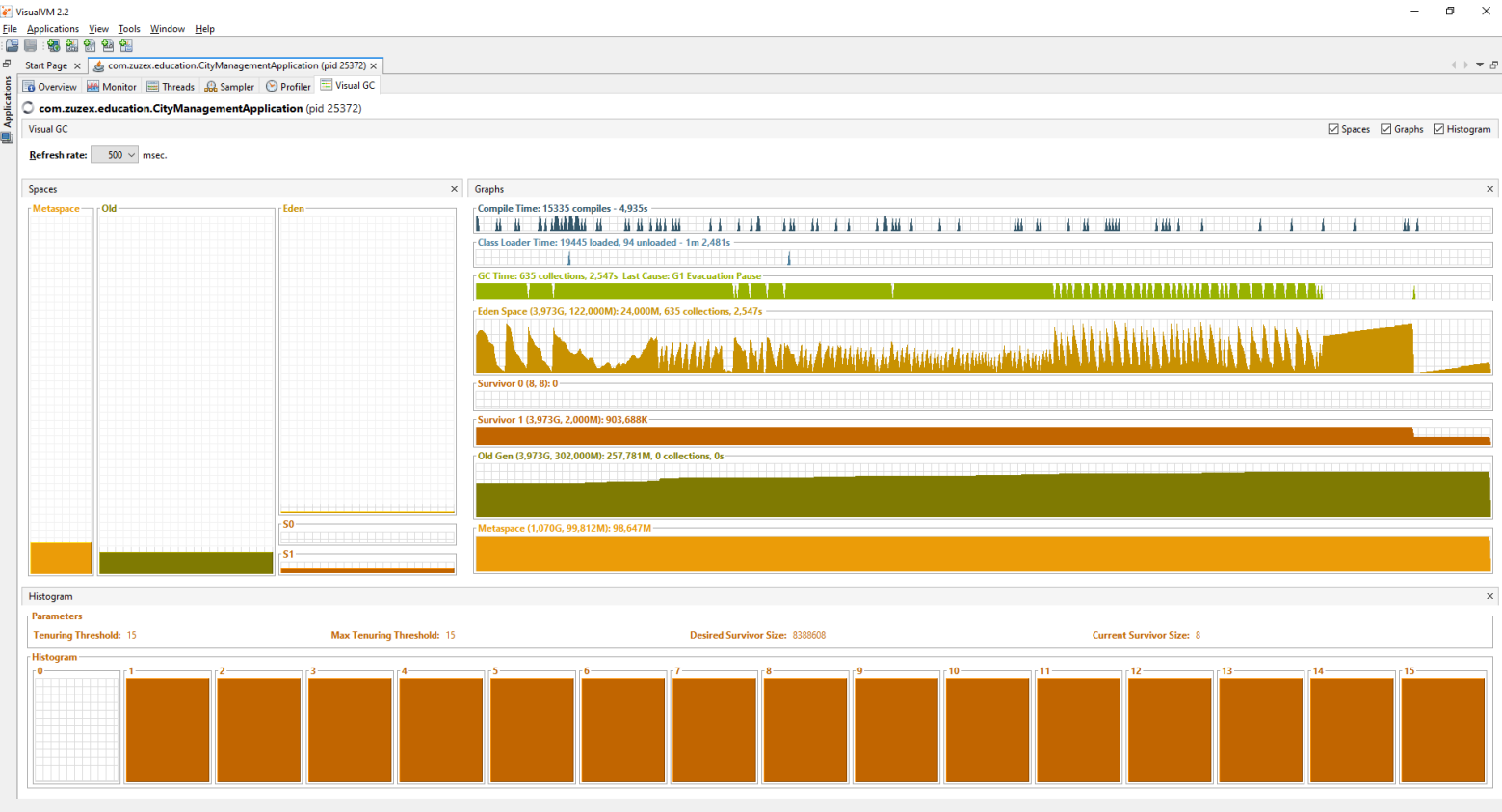
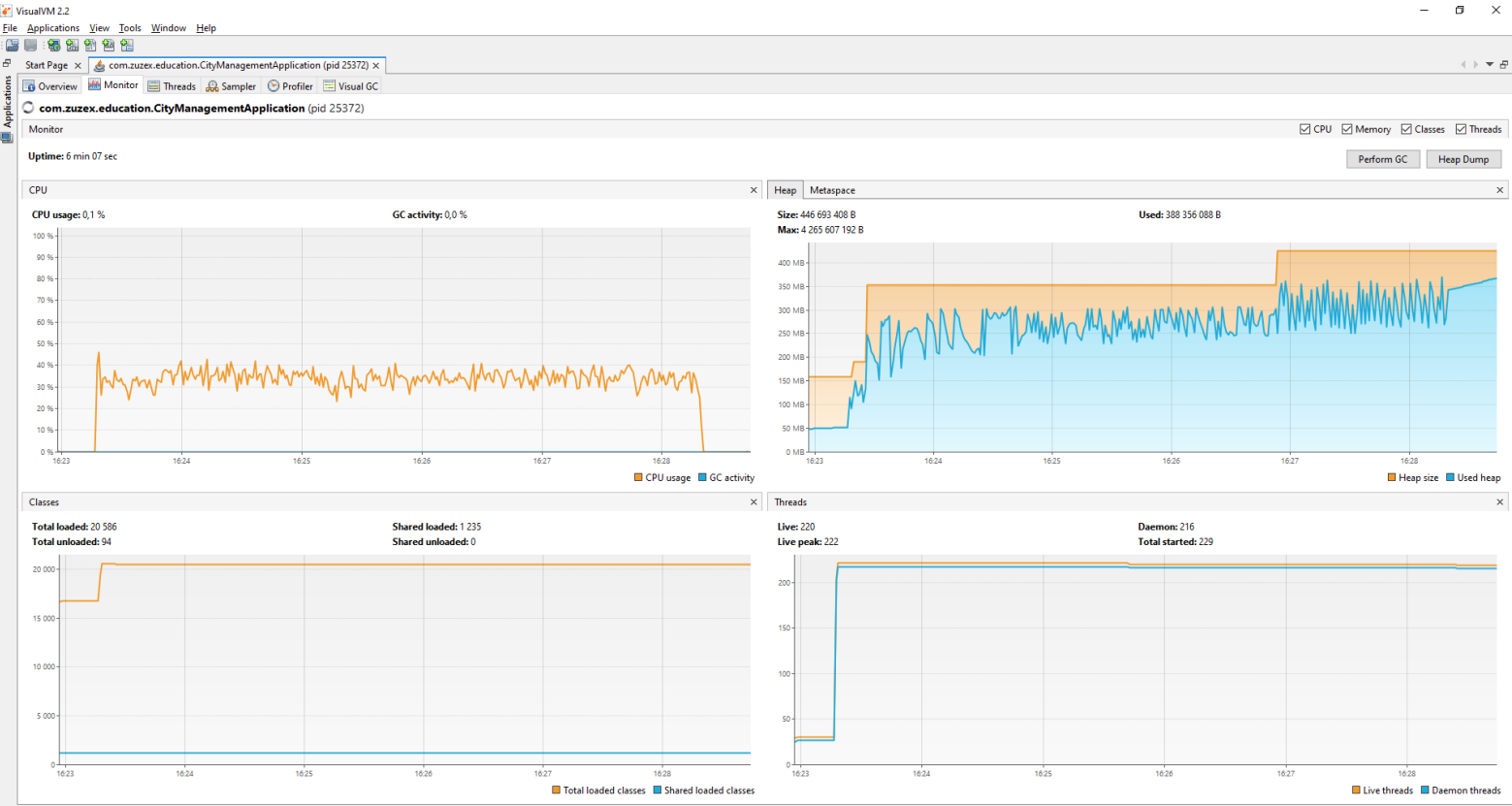
☐ Include group name in label?

Save Table Data

☒ Save Table Header

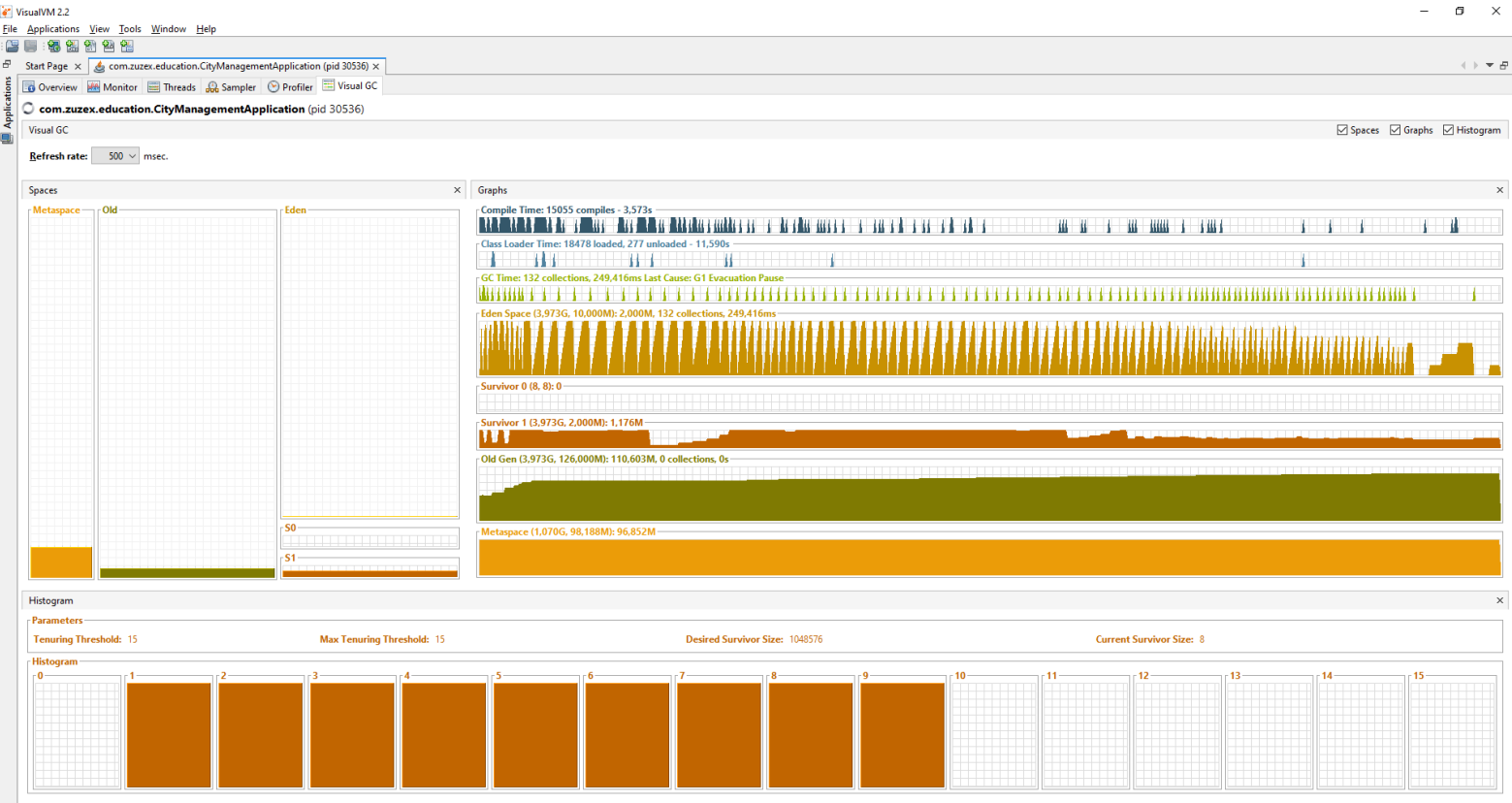
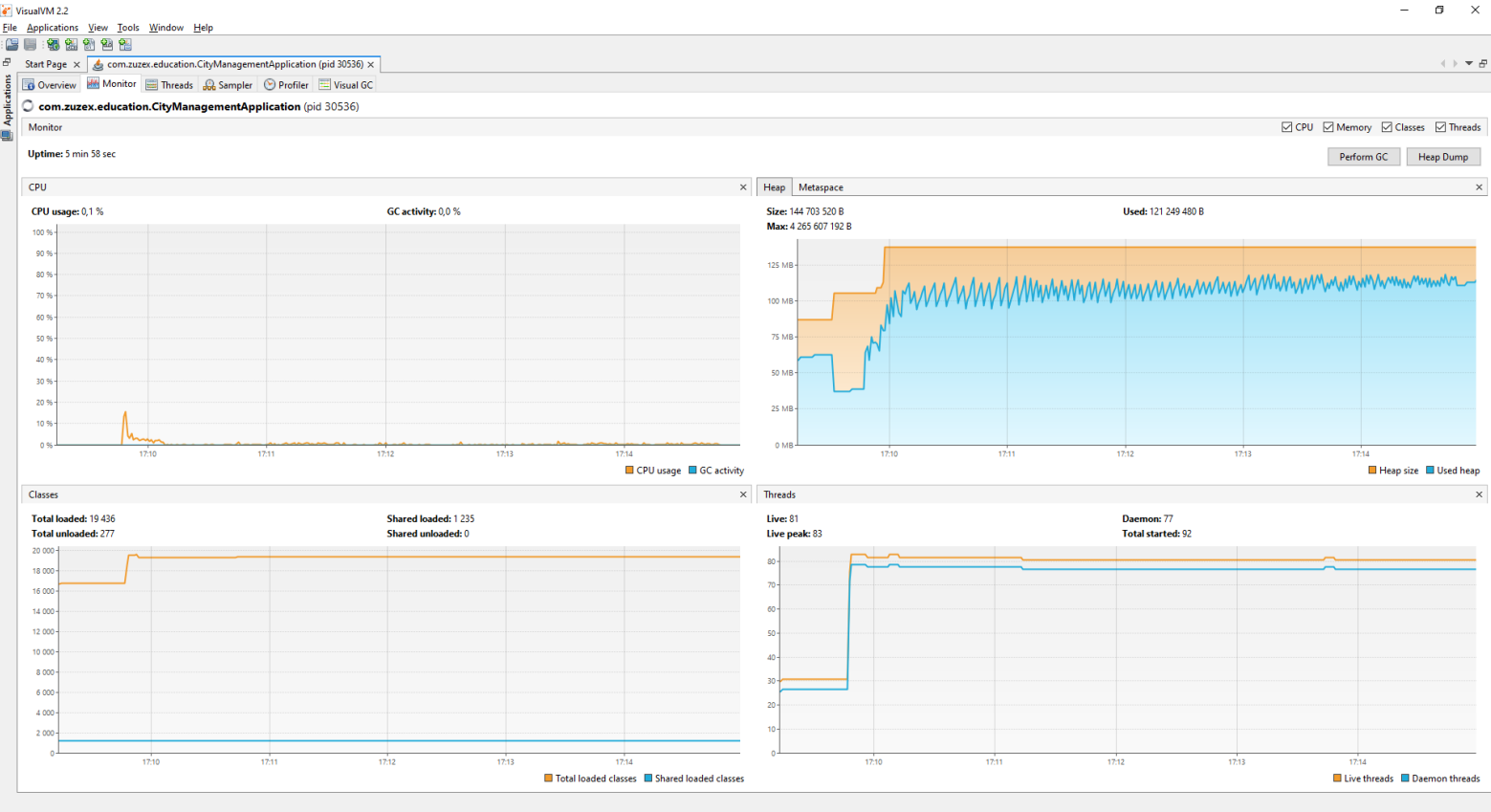
3) Чрезмерная нагрузка (7500 threads, ramp up 45 s, duration 7 min, timer 450000 req/m)

При более чем 7500 потоков, спустя ~2,5 минуты приложение начинает сыпать ошибками Connection Refused. Потребление CPU ~40%, памяти 300-350 МБ. GC работал нормально, справлялся с очисткой heap, потребление им CPU околонулевое. По 99% процентилю, время ответа 2345 мс, RPS составил 3912.



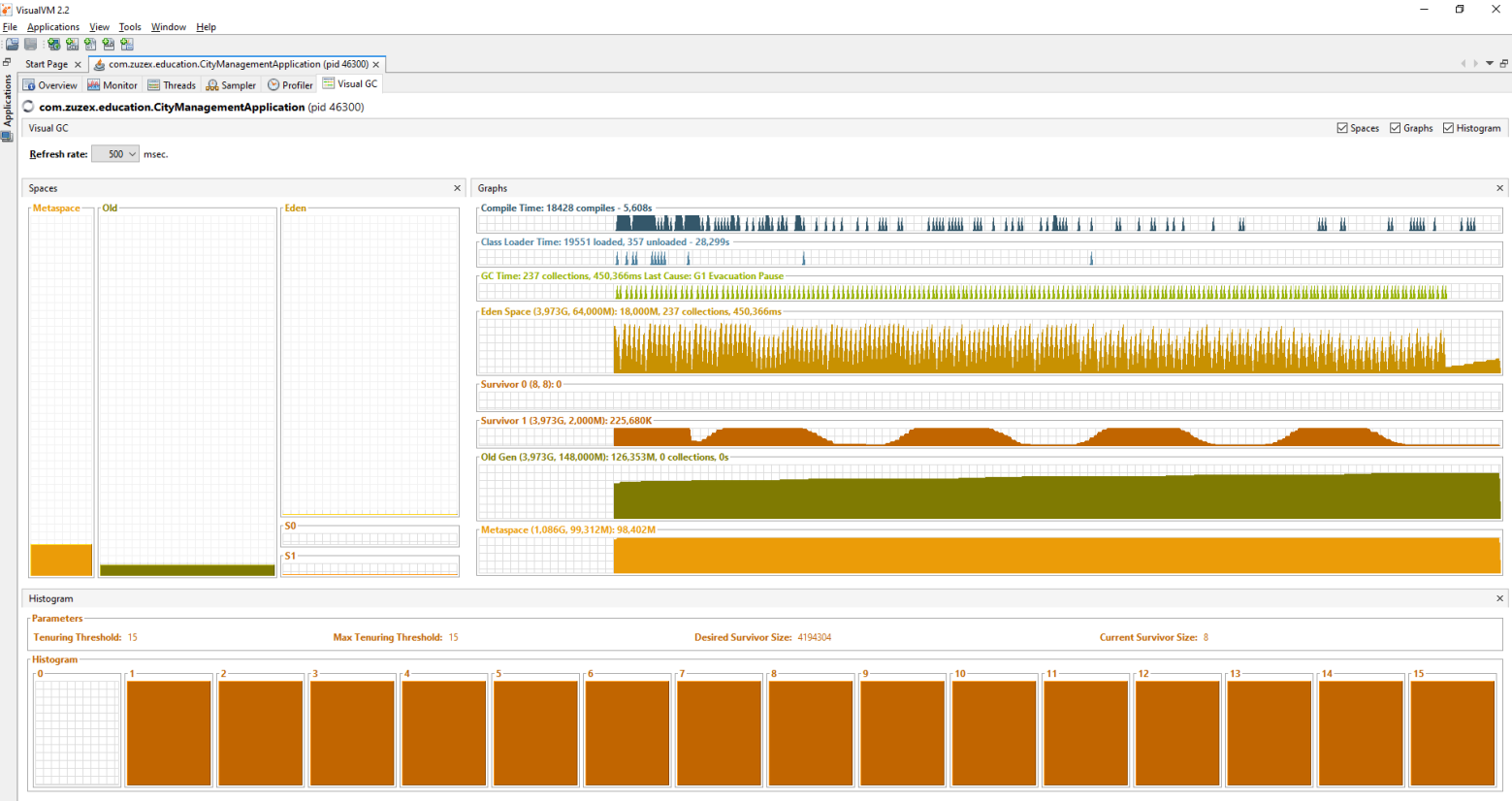
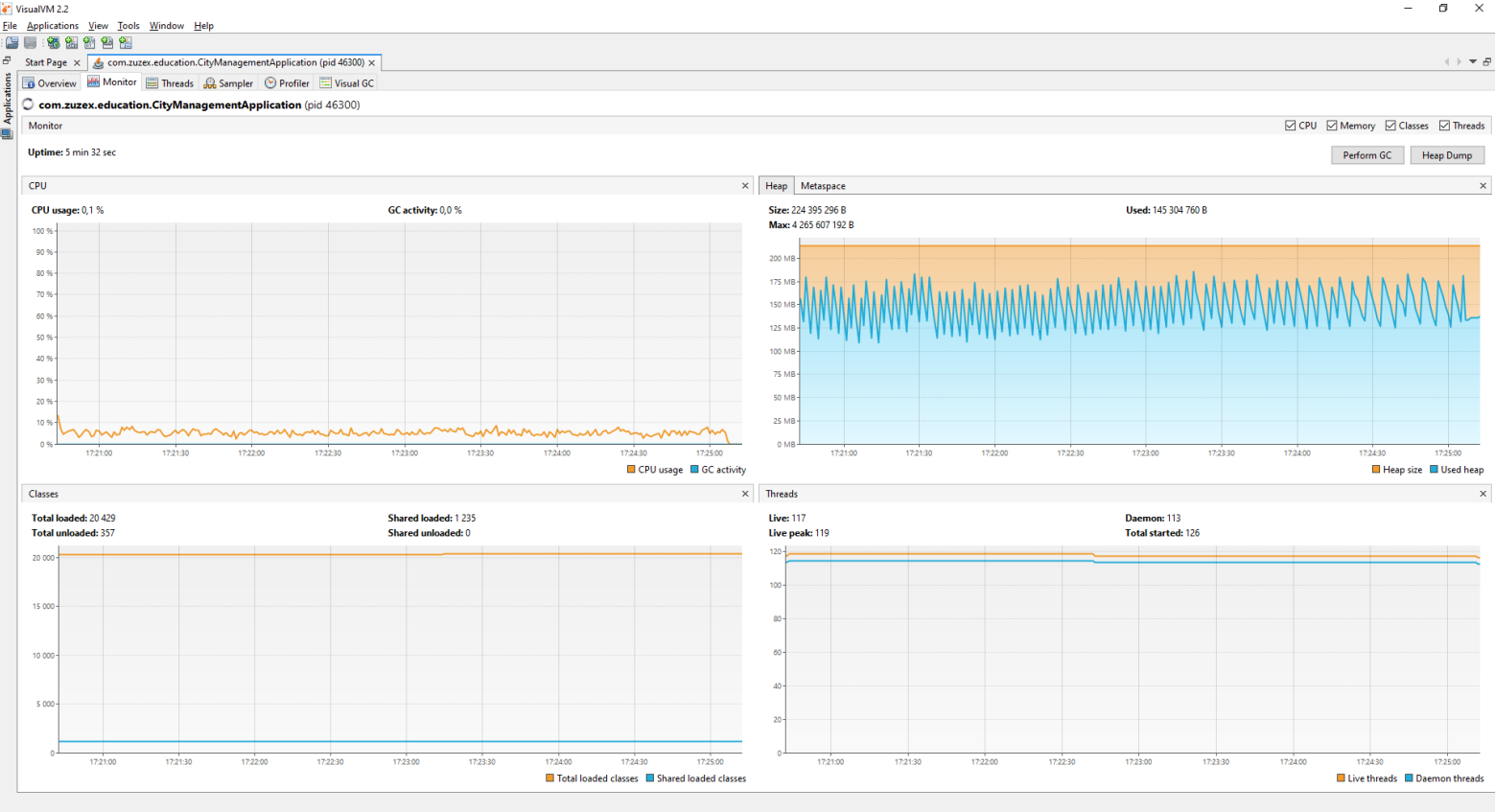
4) Время ответа при 100 RPS (3000 threads, ramp 20 s, duration 5 min)

Среднее время ответа по 99% процентилю составило 6 мс. Самыми медленными оказались POST-запросы (5-15 мс).



5) Время ответа при 1000 RPS (3000 threads, ramp 20 s, duration 5 min)

Среднее время ответа по 99% процентилю составило 7 мс. Самыми медленными оказались POST-запросы (13-15 мс).



Ы

City Management Normal test plan.jmx (C:\Program Files\apache-jmeter-5.6.3\bin\tests\CityManagement\City Management Normal test plan.jmx) - Apache JMeter (5.6.3)

FileEditSearchRunOptionsToolsHelp

00:04:5900/3000

City management Stress test plan

STRESS Thread Group

Constant Throughput Timer

POST Create house w/ address

GET Get address

GET Get house

POST Create person w/ passport

POST Create car

GET Get person

GET Get passport

GET Get car

View Results Tree

Aggregate Report

Aggregate Report

Name:Aggregate Report

Comments:

Write results to file / Read from file

FilenameC:\Program Files\apache-jmeter-5.6.3\bin\tests\CityManagement\stab test results\stress_model\2aggregate_report.jmxBrowse...Log/Display Only:ErrorsSuccessesConfigure

Label	# Samples	Average	Median	90% Line	95% Line	99% Line	Min	Maximum	Error %	Throughput	Received KB/...	Sent KB/sec
POST Create...	39005	4	4	5	5	15	2	462	0.00%	130.0/sec	50.66	43.42
GET Get add...	38546	1	1	2	2	3	0	463	0.00%	128.7/sec	35.18	21.49
GET Get house	38214	1	1	2	2	3	0	91	0.00%	127.7/sec	42.04	20.96
POST Create...	37925	4	4	4	5	14	3	128	0.00%	126.8/sec	55.98	52.64
POST Create...	37679	2	2	3	3	13	1	136	0.00%	126.1/sec	39.27	37.30
GET Get pers...	37469	1	1	2	2	2	0	71	0.00%	125.4/sec	32.21	20.58
GET Get pass...	36964	1	1	2	2	3	0	97	0.00%	123.8/sec	48.72	20.67
GET Get car	36455	1	1	2	2	2	0	74	0.00%	122.2/sec	38.05	19.80
TOTAL	302257	2	1	4	4	7	0	463	0.00%	1007.5/sec	341.06	236.17

☐ Include group name in label?

Save Table Data

☒ Save Table Header

6) Время ответа при предельной работоспособности, за секунду до начала отказа (8000 threads, ramp 45 s, duration 5 min, timer 480000 req/m)

2025-05-06 17:50:19.008 Время ответа - 1962 мс.

Командная строка

```
WARN StatusConsoleListener The use of package scanning to locate plugins is deprecated and will be removed in a future release
WARN StatusConsoleListener The use of package scanning to locate plugins is deprecated and will be removed in a future release
WARN StatusConsoleListener The use of package scanning to locate plugins is deprecated and will be removed in a future release
WARN StatusConsoleListener The use of package scanning to locate plugins is deprecated and will be removed in a future release
An error occurred: The file C:\Program Files\apache-jmeter-5.6.3\bin\tests\CityManagement\stress_test.jmx doesn't exist or can't be opened
errorlevel=1
Для продолжения нажмите любую клавишу . . .
C:\Program Files\apache-jmeter-5.6.3\bin>jmeter.bat -n -t C:\temp_test\stress_test.jmx -l results.jtl
WARN StatusConsoleListener The use of package scanning to locate plugins is deprecated and will be removed in a future release
WARN StatusConsoleListener The use of package scanning to locate plugins is deprecated and will be removed in a future release
WARN StatusConsoleListener The use of package scanning to locate plugins is deprecated and will be removed in a future release
WARN StatusConsoleListener The use of package scanning to locate plugins is deprecated and will be removed in a future release
Creating summariser <summary>
Created the tree successfully using C:\temp_test\stress_test.jmx
Starting standalone test @ 2025 May 6 17:49:13 MSK (1746542953618)
Waiting for possible Shutdown/StopTestNow/HeapDump/ThreadDump message on port 4445
summary = 46829 in 00:00:16 = 2873.5/s Avg: 390 Min: 1 Max: 1342 Err: 0 (0.00%) Active: 2392 Started: 2392 Finished: 0
summary + 118528 in 00:00:30 = 3684.3/s Avg: 1240 Min: 1 Max: 2352 Err: 0 (0.00%) Active: 8000 Started: 8000 Finished: 0
summary + 157357 in 00:00:46 = 3398.9/s Avg: 987 Min: 1 Max: 2352 Err: 0 (0.00%)
summary + 127861 in 00:00:30 = 4262.0/s Avg: 1876 Min: 0 Max: 2824 Err: 198 (0.15%) Active: 8000 Started: 8000 Finished: 0
summary + 285218 in 00:01:16 = 3738.3/s Avg: 1386 Min: 0 Max: 2824 Err: 198 (0.07%)
summary + 123693 in 00:00:30 = 4123.1/s Avg: 1922 Min: 0 Max: 2827 Err: 3116 (2.52%) Active: 8000 Started: 8000 Finished: 0
summary + 408911 in 00:01:46 = 3846.9/s Avg: 1548 Min: 0 Max: 2827 Err: 3314 (0.81%)
summary + 118963 in 00:00:30 = 3698.8/s Avg: 2147 Min: 0 Max: 3578 Err: 6264 (5.65%) Active: 8000 Started: 8000 Finished: 0
summary + 519874 in 00:02:16 = 3814.3/s Avg: 1676 Min: 0 Max: 3578 Err: 9578 (1.84%)
summary + 115852 in 00:00:30 = 3835.1/s Avg: 2062 Min: 0 Max: 3151 Err: 2788 (2.42%) Active: 8000 Started: 8000 Finished: 0
summary + 634926 in 00:02:46 = 3818.0/s Avg: 1746 Min: 0 Max: 3578 Err: 12366 (1.95%)
Завершить выполнение пакетного файла [Y(да)/N(нет)]? y
C:\Program Files\apache-jmeter-5.6.3\bin>
```

248572 1746543019054,1916,GET Get car,200,,STRESS Thread Group 1-4128,text,true,,319,166,8000,8000,http://localhost:8080/api/v1/cars/f21c3dfe-2120-4db3-9e90-26ae75e08596,1916,0,0

248573 1746543019008,1962,GET Get person,200,,STRESS Thread Group 1-4493,text,true,,263,168,8000,8000,http://localhost:8080/api/v1/people/40fcb6e4-633e-42b5-9bbd-cec6fe54be76,1962,0,0

248574 1746543020967,2,GET Get passport,Non HTTP response code: org.apache.http.conn.HttpHostConnectException,Non HTTP response message: Connect to localhost:8080 [localhost/127.0.0.1 localhost/0:0:0:0:0:0:0:1] failed: Connection

248575 1746543019009,1962,GET Get passport,200,,STRESS Thread Group 1-175,text,true,,403,171,8000,8000,http://localhost:8080/api/v1/passports/9b684905-f1a9-4215-8dc2-1a28357e09d4,1962,0,0

248576 1746543019006,1967,POST Create house w/ address,201,,STRESS Thread Group 1-1532,text,true,,399,342,8000,8000,http://localhost:8080/api/v1/houses,1967,0,0

248577 1746543019005,1968,POST Create person w/ passport,201,,STRESS Thread Group 1-7910,text,true,,452,425,8000,8000,http://localhost:8080/api/v1/people,1968,0,0

248578 1746543019010,1963,GET Get passport,200,,STRESS Thread Group 1-4288,text,true,,403,171,8000,8000,http://localhost:8080/api/v1/passports/bc8202b3-89e2-45e5-67a9-f1baa62dedd7,1963,0,0

248579 1746543018964,2010,POST Create person w/ passport,201,,STRESS Thread Group 1-7868,text,true,,452,425,8000,8000,http://localhost:8080/api/v1/people

248580 1746543019008,1966,POST Create person w/ passport,201,,STRESS Thread Group 1-7873,text,true,,452,425,8000,8000,http://localhost:8080/api/v1/people

248581 1746543019009,1965,POST Create person w/ passport,201,,STRESS Thread Group 1-7768,text,true,,452,425,8000,8000,http://localhost:8080/api/v1/people

248582 1746543019009,1966,POST Create person w/ passport,201,,STRESS Thread Group 1-7872,text,true,,452,425,8000,8000,http://localhost:8080/api/v1/people

248583 1746543019008,1967,POST Create person w/ passport,201,,STRESS Thread Group 1-7757,text,true,,452,425,8000,8000,http://localhost:8080/api/v1/people

248584 1746543019005,1920,POST Create person w/ passport,201,,STRESS Thread Group 1-7882,text,true,,452,425,8000,8000,http://localhost:8080/api/v1/people

248585 1746543019010,1965,POST Create person w/ passport,201,,STRESS Thread Group 1-7510,text,true,,452,425,8000,8000,http://localhost:8080/api/v1/people

248586 1746543019010,1965,GET Get house,200,,STRESS Thread Group 1-2624,text,true,,337,169,8000,8000,http://localhost:8080/api/v1/houses/f4bce55f-3235-4222-8000-8000

248587 1746543019010,1965,GET Get house,200,,STRESS Thread Group 1-3653,text,true,,337,169,8000,8000,http://localhost:8080/api/v1/houses/683494a8-4a22-8000-8000-8000

248588 1746543019010,1966,POST Create person w/ passport,201,,STRESS Thread Group 1-7877,text,true,,452,425,8000,8000,http://localhost:8080/api/v1/people

248589 1746543019012,1965,GET Get person,200,,STRESS Thread Group 1-6489,text,true,,263,168,8000,8000,http://localhost:8080/api/v1/people/5656cb8b-217c-4000-8000-8000

248590 1746543019058,1919,GET Get person,200,,STRESS Thread Group 1-2340,text,true,,263,168,8000,8000,http://localhost:8080/api/v1/people/6a830c00-e84f-4000-8000-8000

248591 1746543019014,1963,GET Get person,200,,STRESS Thread Group 1-102,text,true,,263,168,8000,8000,http://localhost:8080/api/v1/people/bbffb3cf-b1d3-4000-8000-8000

248592 1746543019016,1967,GET Get car,200,,STRESS Thread Group 1-4212,text,true,,319,166,8000,8000,http://localhost:8080/api/v1/cars/ae62c6d5-ae11-4d88-8000-8000

Find

Find Replace Find in Files Find in Projects Mark

Find what: selected

Find Next

Count

Find All in Current Document

Find All in All Opened Documents

Close

☐ Backward direction

☐ Match whole word only

☐ Match case

7) Предельное кол-во RPS при предельной работоспособности (7500 threads, ramp up 45 s, duration 7 min, timer 450000 req/m)

Предельное количество RPS составило 4500/sec

City Management Normal test plan.jmx (C:\Program Files\apache-jmeter-5.6.3\bin\tests\CityManagement\City Management Normal test plan.jmx) - Apache JMeter (5.6.3)

File Edit Search Run Options Tools Help

City management Stress test plan

STRESS Thread Group

- Constant Throughput Timer
- POST Create house w/ address
 - GET Get address
 - GET Get house
- POST Create person w/ passport
 - GET Get person
 - GET Get passport
 - GET Get car
- POST Create car
 - View Results Tree
 - Aggregate Report

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file

Filename: C:\Program Files\apache-jmeter-5.6.3\bin\tests\CityManagement\stab test results\stress_model\2aggregate_report.jmx

Log/Display Only: ☐ Errors ☐ Successes ☐ Configure

Label	# Samples	Average	Median	90% Line	95% Line	99% Line	Min	Maximum	Error %	Throughput	Received KB/...	Sent KB/sec
POST Create...	209942	1785	1864	2042	2109	2350	4	2919	0.00%	496.5/sec	193.46	165.83
GET Get add...	208933	1785	1862	2037	2101	2339	1	2924	0.00%	494.7/sec	135.26	82.61
GET Get house	208006	1785	1859	2034	2096	2336	1	2925	0.00%	493.1/sec	162.27	80.89
POST Create...	207176	1802	1874	2053	2117	2336	5	2883	0.00%	491.3/sec	216.85	203.91
POST Create...	206242	1802	1871	2046	2110	2347	2	2880	0.00%	489.4/sec	152.47	144.82
GET Get pers...	205568	1794	1857	2039	2107	2349	1	2847	0.00%	487.6/sec	125.24	80.00
GET Get pass...	204822	1795	1855	2036	2104	2349	1	2942	0.00%	486.0/sec	191.27	81.16
GET Get car	203569	1797	1854	2033	2101	2350	1	2930	0.00%	483.1/sec	150.49	78.31
TOTAL	1654358	1793	1862	2040	2106	2345	1	2942	0.00%	3912.5/sec	1324.22	915.49

☐ Include group name in label? ☒ Save Table Header