D&T II

D03: Performance testing

Performance test suite

Group 20

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Content

Introduction:

To test all user cases for Acme-Hacker-Rank we used Jmeter with the following method:

- Group some requisites to do the testing to be more efficient.
- A test with 100 users and 10 loops to see if there is any error in the code.
- A test with a number between 130 and 180 users to see the maximum users that supports the actions without any problem relative to the user experience, in this case we are going to check the time spend to do the actions, looking at the 90% Line results.
- A test with the first errors encountered and the most probably reason that made that errors occur. Checking the computer performance we will observe the processor, memory, disk and network behavior.

All the test were made with the same computer in the pre-production virtual machine, with 4 GB of ram and a 2 core processor.

The computer specifications are:

- CPU: Intel core I5 7200u
- Mainboard: Medion D15KHN
- Memory: 8 GB DDR3
- Graphics: Nvidia Geforce GTX 950M
- 245 GB SSD

Performance tests:

Requisite: 7.1

7. An actor who is not authenticated must be able to:

      1. Register to the system as a hacker.

Thread Group

Name: Thread Group
Comments:

Action to be taken after a Sampler error

  ⦿ Continue   ○ Start Next Thread Loop   ○ Stop Thread   ○ Stop Test   ○ Stop Test Now

Thread Properties

Number of Threads (users): 100

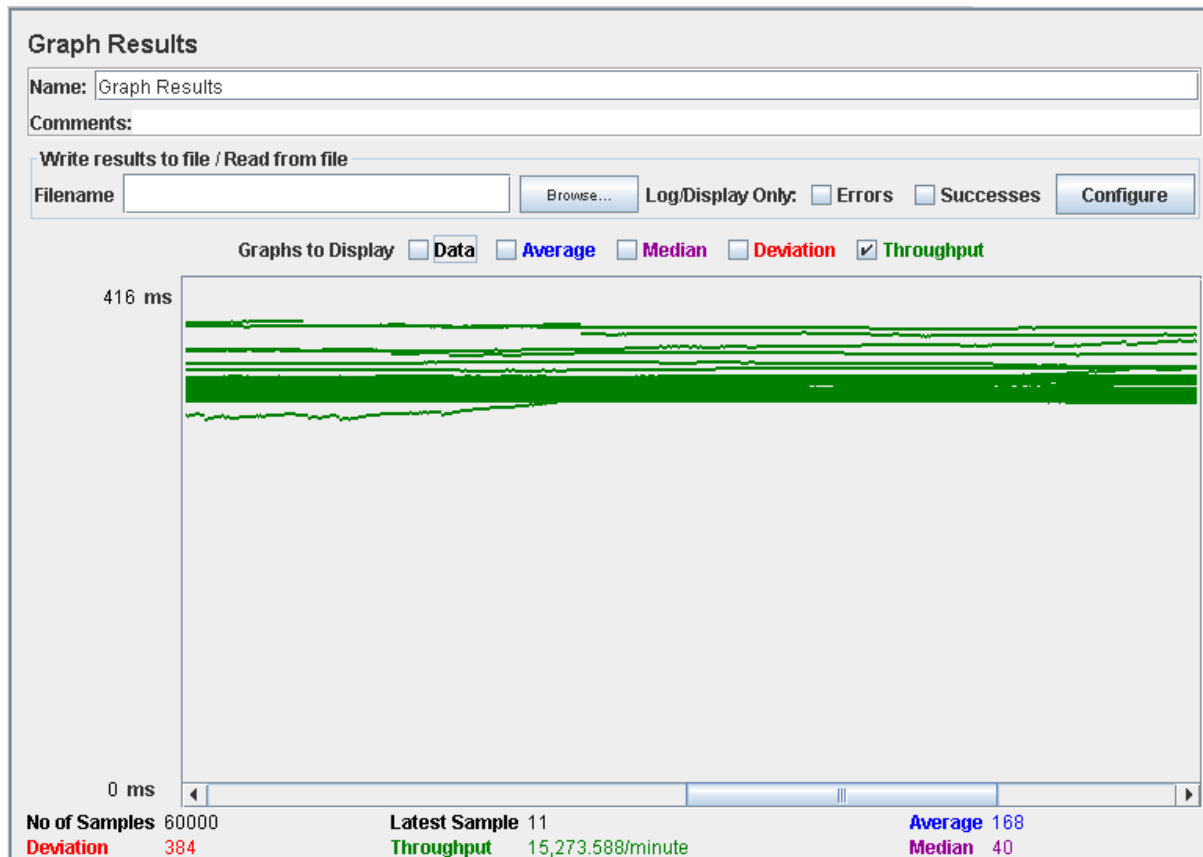Ramp-Up Period (in seconds): 1

Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 9,879s.

Aggregate Report

Name: Aggregate Report
Comments:

Write results to file / Read from file

Filename   Browse...   Log/Display Only: ☐ Errors ☐ Successes Configure

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/welcome/index.do	2000	646	366	1552	6	7402	0.00%	8.7/sec	26.0
/scripts/jquery.js	6000	198	139	453	8	2623	0.00%	25.5/s...	6862.0
/styles/displaytag.css	6000	33	22	62	2	1555	0.00%	25.5/s...	77.5
/scripts/jmenu.js	6000	37	26	68	2	2700	0.00%	25.5/s...	270.7
/styles/jmenu.css	6000	31	22	59	2	1119	0.00%	25.5/s...	49.4
/styles/common.css	6000	33	22	60	1	1112	0.00%	25.5/s...	16.2
/scripts/jquery-ui.js	6000	301	211	689	13	3180	0.00%	25.5/s...	11575.4
/images/logo.png	6000	36	25	67	2	1971	0.00%	25.5/s...	401.7
/success.txt	7000	44	34	66	18	937	0.00%	29.7/s...	11.1
/images/arrow_down.png	2000	36	24	63	1	1102	0.00%	8.6/sec	4.3
/hacker/create.do	2000	890	648	1988	9	7995	0.00%	8.8/sec	63.6
/security/login.do	1000	210	105	563	4	2500	0.00%	4.4/sec	13.6
/j_spring_security_check	1000	981	730	2101	14	7115	0.00%	4.4/sec	16.6
/	2000	462	277	1010	5	5588	0.00%	8.8/sec	28.4
/j_spring_security_logout	1000	477	266	1069	8	6503	0.00%	4.4/sec	14.3
TOTAL	60000	168	40	456	1	7995	0.00%	254.6/...	19411.8

Performance thread results: 15,273 per minute

Graph Results

Name: Graph Results

Comments:

Write results to file / Read from file

Filename [   ] [Browse...] Log/Display Only: ☐ Errors ☐ Successes [Configure]

Graphs to Display ☐ **Data** ☐ **Average** ☐ **Median** ☐ **Deviation** ☑ **Throughput**

416 ms

0 ms

No of Samples 60000	**Latest Sample** 11	**Average** 168
Deviation 384	**Throughput** 15,273.588/minute	**Median** 40

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

◉ Continue ○ Start Next Thread Loop ○ Stop Thread ○ Stop Test ○ Stop Test Now

Thread Properties

Number of Threads (users): 160

Ramp-Up Period (in seconds): 1

Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 20,851s

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file

Filename [ ] Browse... Log/Display Only: ☐ Errors ☐ Successes [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/welcome/index.do	3200	1687	840	4460	7	20340	0.00%	8.2/sec	24.3
/scripts/jquery.js	9600	323	226	730	9	3123	0.00%	24.2/s...	6518.6
/styles/displaytag.css	9600	106	36	275	1	2023	0.00%	24.2/s...	73.9
/scripts/jmenu.js	9600	102	43	223	2	2111	0.00%	24.2/s...	257.4
/styles/jmenu.css	9600	96	37	218	2	1882	0.00%	24.2/s...	47.2
/styles/common.css	9600	97	37	239	1	1925	0.00%	24.2/s...	15.6
/scripts/jquery-ui.js	9600	460	319	1036	12	3714	0.00%	24.2/s...	10995.8
/images/logo.png	9600	96	40	223	2	2297	0.00%	24.2/s...	381.8
/success.txt	11200	53	38	77	18	1940	0.00%	28.2/s...	10.6
/images/arrow_down.png	3200	110	36	326	2	1901	0.00%	8.1/sec	4.1
/hacker/create.do	3200	2192	1348	5439	7	22066	0.00%	8.2/sec	59.5
/security/login.do	1600	351	200	877	4	2312	0.00%	4.1/sec	12.7
/j_spring_security_check	1600	3039	1970	7222	12	18023	0.00%	4.2/sec	15.6
/	3200	1287	824	2941	4	18889	0.00%	8.4/sec	27.0
/j_spring_security_logout	1600	1327	728	3283	7	19779	0.00%	4.2/sec	13.6
TOTAL	96000	389	62	896	1	22066	0.00%	241.9/...	18447.0

Performance thread results: 14,513 per minute

Graph Results

Name: Graph Results

Comments:

Write results to file / Read from file

Filename [ ] Browse... Log/Display Only: ☐ Errors ☐ Successes [Configure]

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

978 ms

0 ms

| **No of Samples** 96000 | **Latest Sample** 9 | **Average** 389 |
| **Deviation** 1057 | **Throughput** 14,513.02/minute | **Median** 62 |

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

◉ Continue　○ Start Next Thread Loop　○ Stop Thread　○ Stop Test　○ Stop Test Now

Thread Properties

Number of Threads (users): 180

Ramp-Up Period (in seconds): 1

Loop Count: ☐ Forever　10

☐ Delay Thread creation until needed

☐ Scheduler

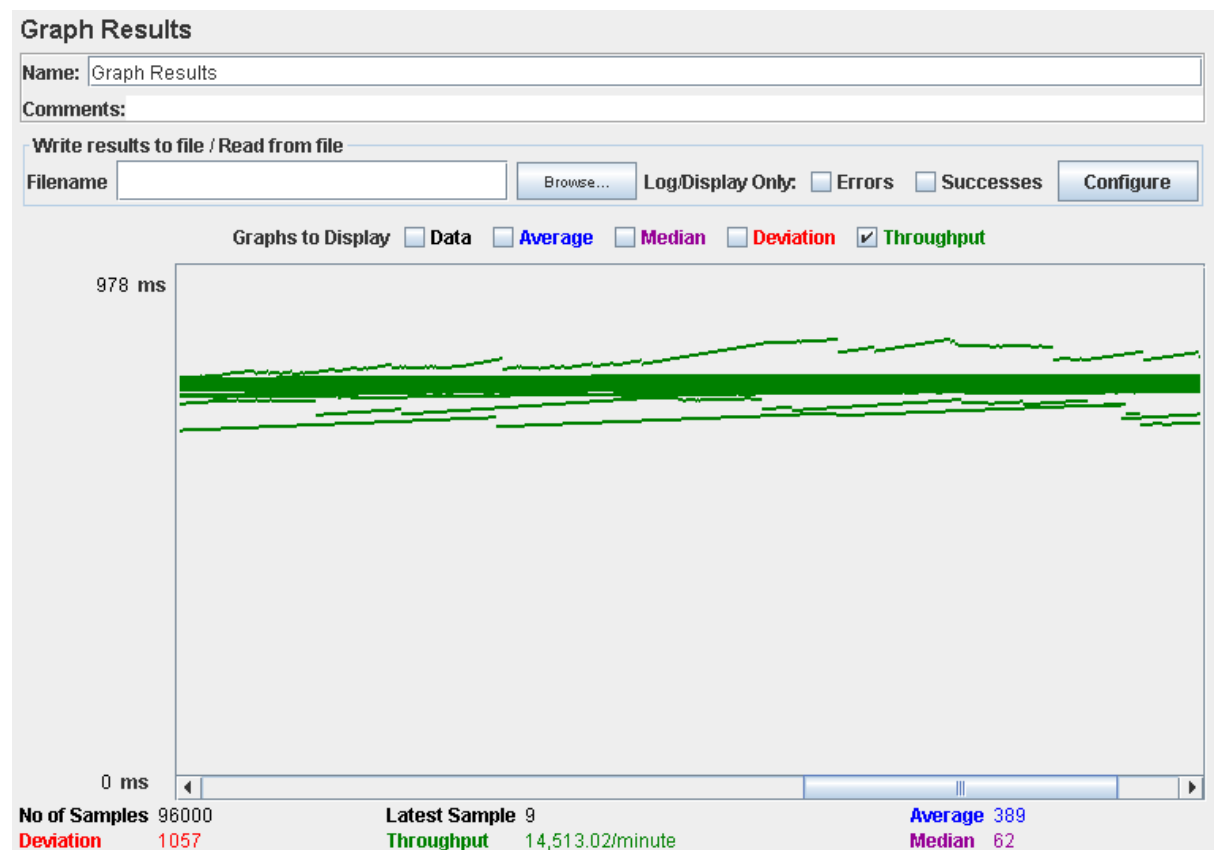Performance test 90% results: Total 26,860s

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file
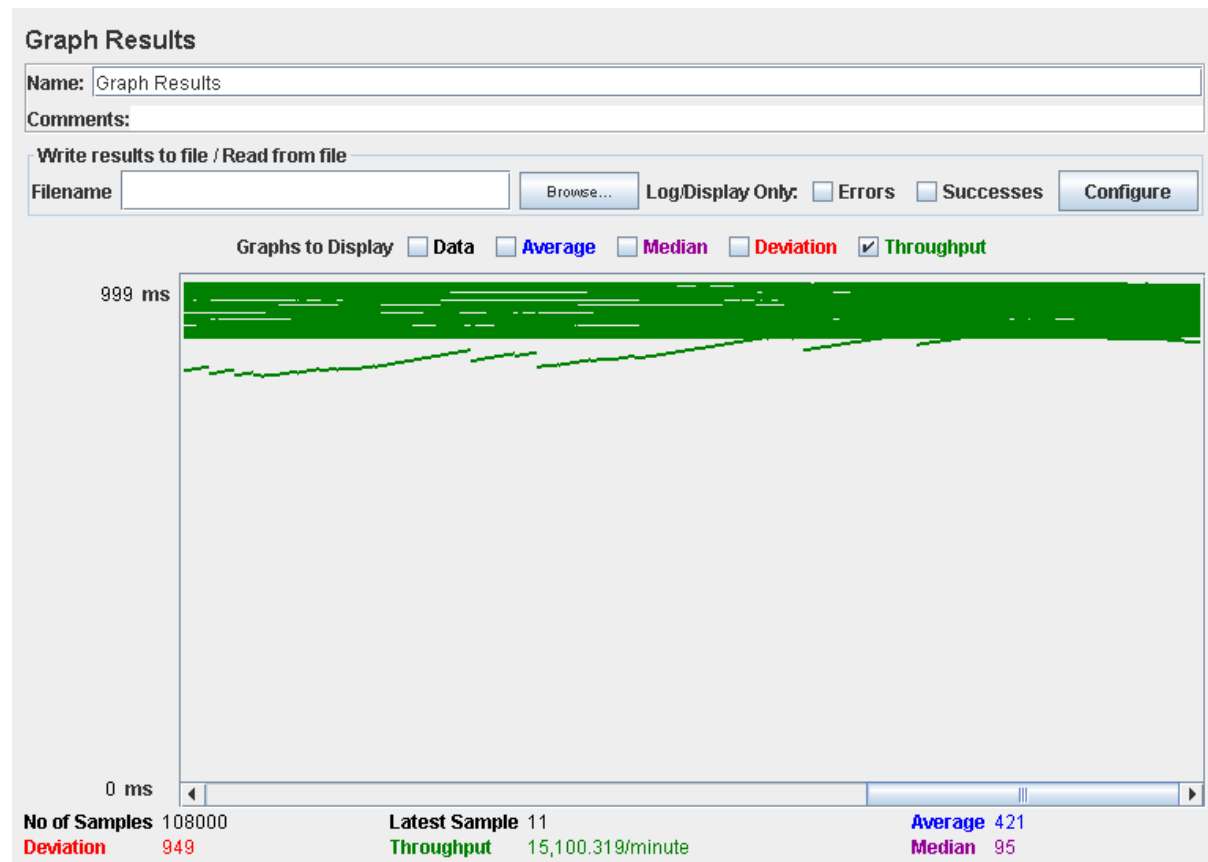
Filename [　　　　　　　　] [Browse...]　Log/Display Only: ☐ Errors　☐ Successes　[Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/welcome/index.do	3600	1479	744	3988	6	16912	0.03%	8.5/sec	25.2
/scripts/jquery.js	10800	427	304	984	1	3712	0.16%	25.2/s...	6771.9
/styles/displaytag.css	10800	183	53	571	0	3396	0.12%	25.2/s...	76.8
/scripts/jmenu.js	10800	176	63	544	0	2915	0.12%	25.2/s...	267.6
/styles/jmenu.css	10800	166	52	517	1	2614	0.15%	25.2/s...	49.1
/styles/common.css	10800	175	53	555	1	2784	0.12%	25.2/s...	16.2
/scripts/jquery-ui.js	10800	560	415	1219	0	3454	0.12%	25.2/s...	11428.1
/images/logo.png	10800	153	50	462	1	2396	0.08%	25.2/s...	397.0
/success.txt	12600	61	39	85	18	3046	0.00%	29.4/s...	11.0
/images/arrow_down.png	3600	181	46	595	2	2454	0.00%	8.4/sec	4.3
/hacker/create.do	3600	1914	1229	4487	7	23816	0.03%	8.5/sec	61.7
/security/login.do	1800	421	267	1019	3	3850	0.00%	4.3/sec	13.3
/j_spring_security_check	1800	2649	1692	6417	11	20748	0.00%	4.4/sec	16.4
/	3600	1204	803	2695	2	23092	0.14%	8.7/sec	28.2
/j_spring_security_logout	1800	1174	687	2722	1	14713	0.28%	4.4/sec	14.2
TOTAL	108000	421	95	1016	0	23816	0.10%	251.7/...	19168.5

Performance thread results: 15,100 per minute

Graph Results

Name: Graph Results
Comments:

Write results to file / Read from file
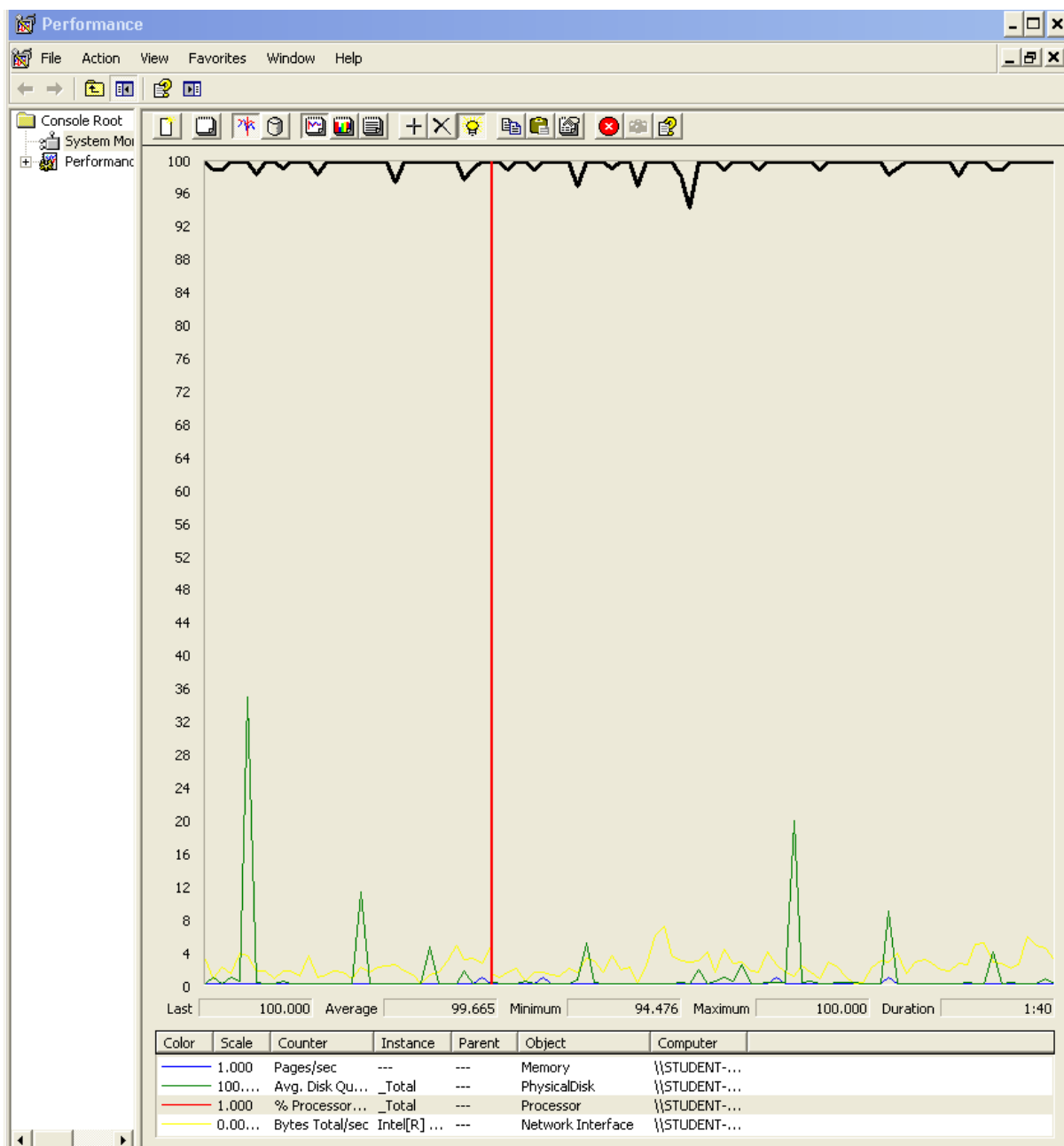Filename: _____ [Browse...] Log/Display Only: ☐ Errors ☐ Successes [Configure]

Graphs to Display ☐ Data ☐ **Average** ☐ **Median** ☐ **Deviation** ☑ **Throughput**

999 ms

0 ms

| **No of Samples** 108000 | **Latest Sample** 11 | **Average** 421 |
| **Deviation** 949 | **Throughput** 15,100.319/minute | **Median** 95 |

Computer performance:

Analysis results:

100 users and 10 loops: the application runs perfectly

160 users and 10 loops: the application runs without errors but the times are really high (7200ms).

180 users and 10 loops: the application begins to have errors we believe is a processors bottleneck problem.

Requisites: 7.2, 7.3

7. An actor who is not authenticated must be able to:

      2. List the positions available and navigate to the corresponding companies.

      3. List the companies available and navigate to the corresponding positions.

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

    ◉ Continue   ○ Start Next Thread Loop   ○ Stop Thread   ○ Stop Test   ○ Stop Test Now

Thread Properties

Number of Threads (users): 100

Ramp-Up Period (in seconds): 1

Loop Count: ☐ Forever   10

☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 11,625s.

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file

Filename   [Browse...]   Log/Display Only: ☐ Errors   ☐ Successes   [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
/welcome/i...	1000	709	438	1753	5	6621	0.00%	5.5/sec	16.6
/styles/com...	6000	20	14	33	1	2239	0.00%	31.6/sec	20.0
/styles/jme...	6000	19	14	34	1	1264	0.00%	31.6/sec	61.2
/scripts/jqu...	6000	216	189	403	13	1345	0.00%	31.5/sec	14335.2
/scripts/jme...	6000	24	18	40	2	1176	0.00%	31.6/sec	335.5
/scripts/jqu...	6000	134	109	257	8	1896	0.00%	31.6/sec	8503.1
/favicon.ico	6000	18	13	33	2	789	0.00%	31.6/sec	44.5
/styles/displ...	6000	18	14	33	1	1024	0.00%	31.6/sec	96.1
/images/log...	6000	19	14	35	2	441	0.00%	31.5/sec	497.6
/success.txt	1000	41	27	56	13	1847	0.00%	5.5/sec	2.1
/images/arr...	2000	16	12	30	2	663	0.00%	10.7/sec	5.4
/company/li...	1000	747	462	1877	9	5711	0.00%	5.5/sec	22.9
/images/arr...	3000	15	11	28	1	656	0.00%	16.1/sec	8.0
/position/lis...	1000	731	432	1677	6	6747	0.00%	5.5/sec	20.6
/position/di...	1000	806	479	1933	6	7143	0.00%	5.6/sec	18.8
/position/lis...	1000	746	521	1737	8	6641	0.00%	5.6/sec	22.0
/company/d...	1000	661	405	1666	5	7321	0.00%	5.6/sec	20.0
TOTAL	60000	122	21	272	1	7321	0.00%	315.4/sec	24010.0

Performance thread results: 18,922 per minute.

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

◉ Continue   ◯ Start Next Thread Loop   ◯ Stop Thread   ◯ Stop Test   ◯ Stop Test Now

Thread Properties

Number of Threads (users): 150

Ramp-Up Period (in seconds): 1

Loop Count: □ Forever 10

□ Delay Thread creation until needed

□ Scheduler

0 ms

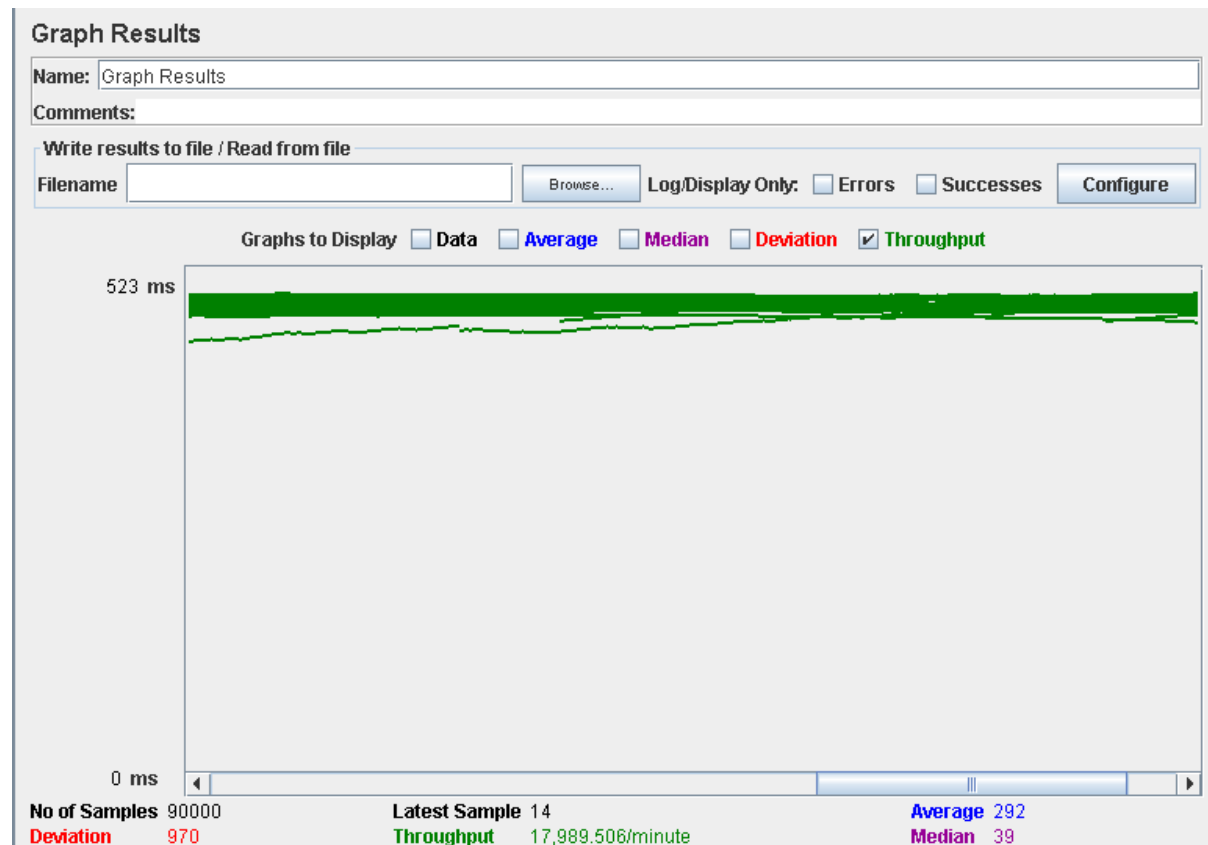| No of Samples	60000	Latest Sample	16	Average	122
Deviation	357	Throughput	18,922.073/minute	Median	21

Performance test 90% results: Total 32,536s.

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file

Filename: [Browse...]   Log/Display Only: □ Errors   □ Successes   [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
/welcome/i...	1500	2173	1291	5327	6	17367	0.00%	5.2/sec	15.6
/styles/com...	9000	48	22	93	1	1822	0.00%	30.0/sec	19.3
/styles/jme...	9000	50	23	96	1	1637	0.00%	30.0/sec	58.4
/scripts/jqu...	9000	316	232	654	12	2714	0.00%	30.0/sec	13627.1
/scripts/jme...	9000	56	28	114	2	1811	0.00%	30.0/sec	319.1
/scripts/jqu...	9000	205	146	425	7	2828	0.00%	30.0/sec	8081.7
/favicon.ico	9000	50	22	102	1	1741	0.00%	30.0/sec	42.6
/styles/displ...	9000	48	23	98	1	1515	0.00%	30.0/sec	91.6
/images/log...	9000	51	26	105	2	1438	0.00%	30.0/sec	473.3
/success.txt	1500	77	50	142	17	1921	0.00%	5.2/sec	1.9
/images/arr...	3000	45	21	92	2	1109	0.00%	10.2/sec	5.2
/company/li...	1500	1972	1189	4862	8	14958	0.00%	5.2/sec	21.5
/images/arr...	4500	44	21	91	1	1295	0.00%	15.2/sec	7.7
/position/lis...	1500	1934	1101	4690	6	23738	0.00%	5.2/sec	19.3
/position/di...	1500	2099	1221	5466	7	17040	0.00%	5.2/sec	17.6
/position/lis...	1500	2017	1272	4885	6	19384	0.00%	5.2/sec	20.5
/company/d...	1500	2073	1221	5294	6	22729	0.00%	5.2/sec	18.7
TOTAL	90000	292	39	498	1	23738	0.00%	299.8/sec	22829.1

Performance thread results: 17,989 per minute.

Graph Results

Name: Graph Results

Comments:

Write results to file / Read from file

Filename [   ] [Browse...]   Log/Display Only: ☐ Errors ☐ Successes   [Configure]

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

No of Samples 90000	**Latest Sample** 14		**Average** 292
Deviation 970	**Throughput** 17,989.506/minute		**Median** 39

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

◉ Continue ○ Start Next Thread Loop ○ Stop Thread ○ Stop Test ○ Stop Test Now

Thread Properties

Number of Threads (users): 180

Ramp-Up Period (in seconds): 1
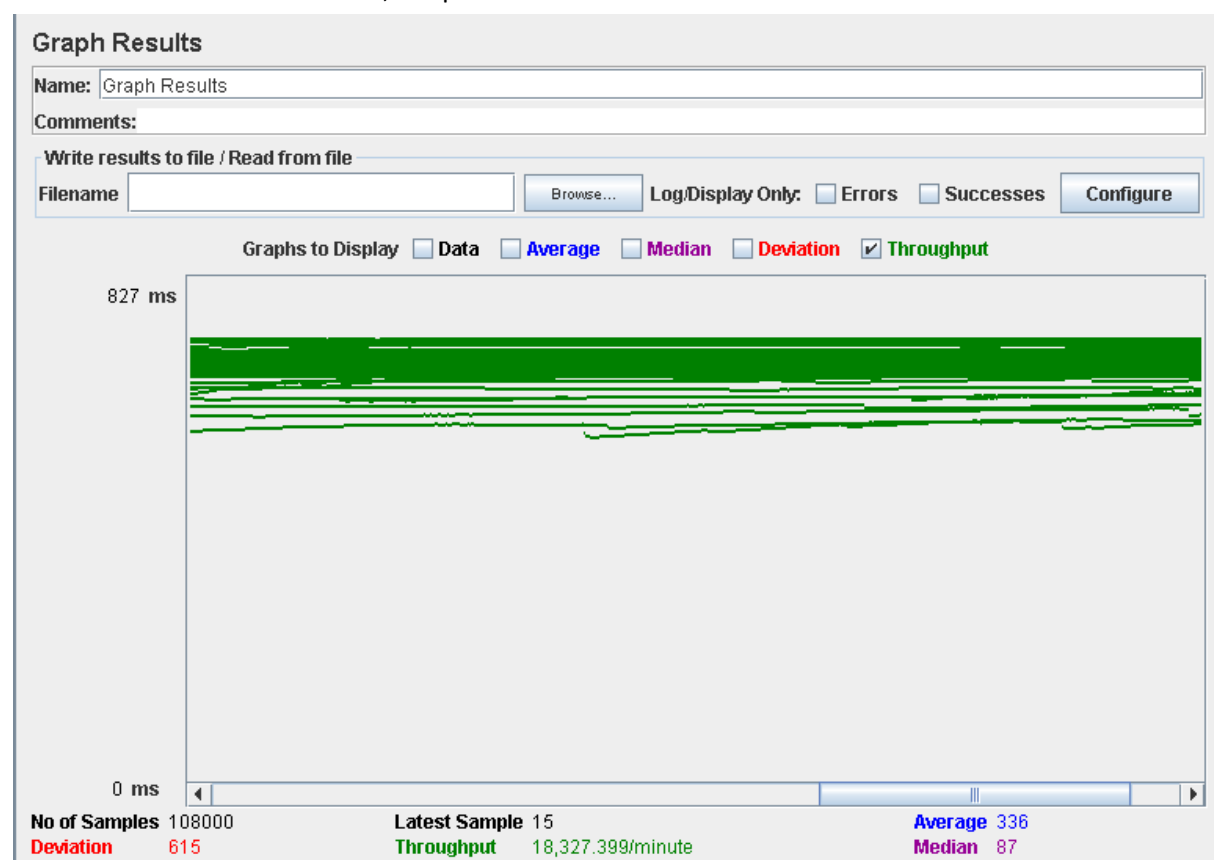
Loop Count: ☐ Forever 10

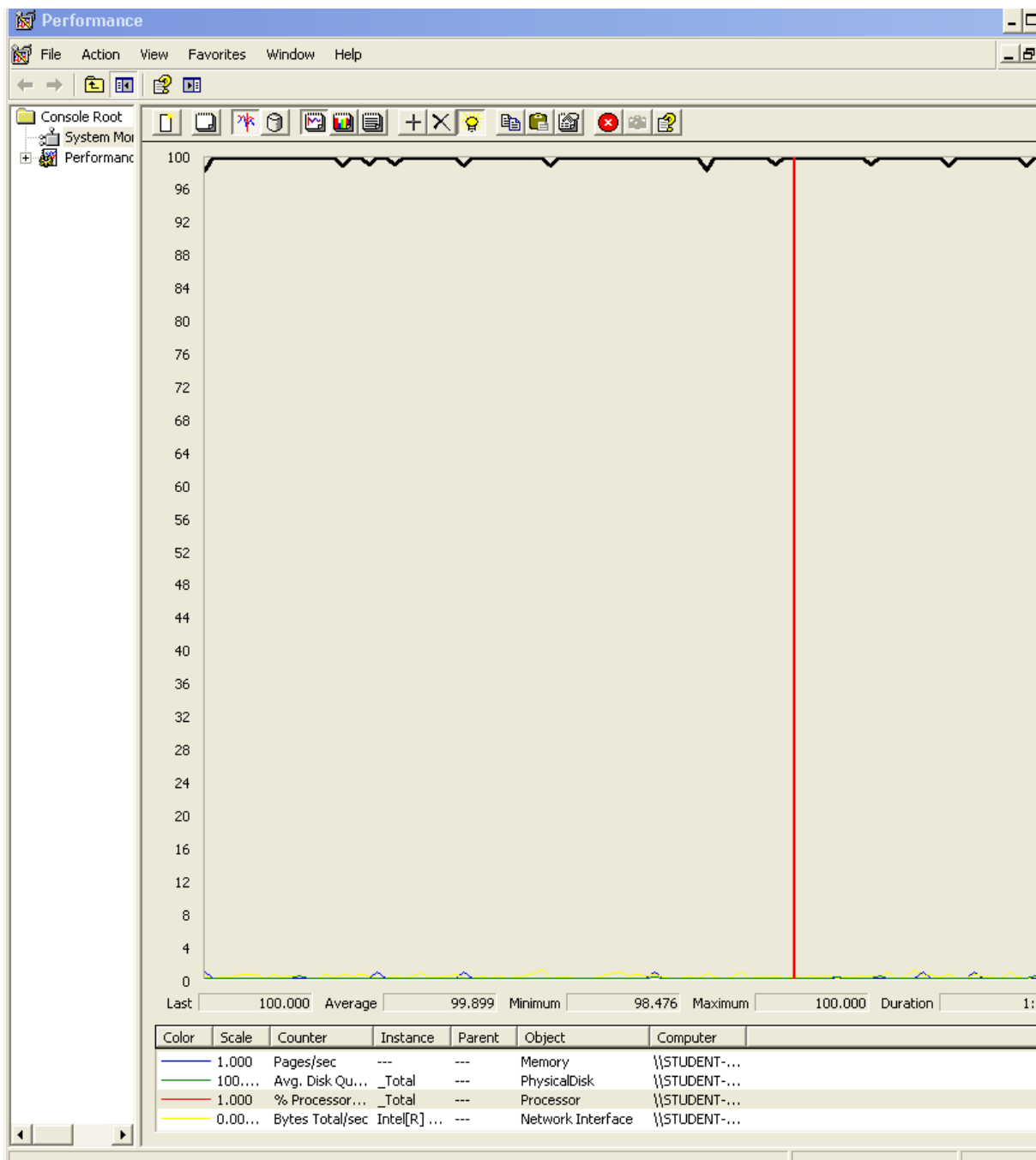☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 22,829s.

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file

Filename [   ] [Browse...] Log/Display Only: ☐ Errors ☐ Successes [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
/welcome/i...	1800	1194	781	2786	6	12252	0.06%	5.3/sec	15.9
/styles/com...	10800	221	52	682	1	3031	0.24%	30.6/sec	19.7
/styles/jme...	10800	218	47	670	0	3151	0.20%	30.6/sec	59.5
/scripts/jqu...	10800	517	404	1084	0	3627	0.19%	30.6/sec	13857.5
/scripts/jme...	10800	208	54	654	0	3694	0.25%	30.6/sec	324.4
/scripts/jqu...	10800	378	275	840	0	3138	0.18%	30.6/sec	8219.6
/favicon.ico	10800	151	33	518	0	2739	0.26%	30.6/sec	43.3
/styles/displ...	10800	188	42	604	0	3014	0.30%	30.6/sec	93.1
/images/log...	10800	147	38	489	0	3105	0.24%	30.6/sec	481.1
/success.txt	1800	114	77	226	15	1379	0.00%	5.3/sec	2.0
/images/arr...	3600	144	31	480	0	2740	0.22%	10.3/sec	5.3
/company/li...	1800	1224	791	3048	1	10397	0.11%	5.3/sec	21.9
/images/arr...	5400	142	32	485	0	2733	0.26%	15.5/sec	7.8
/position/lis...	1800	1223	792	2849	8	13616	0.06%	5.2/sec	19.5
/position/di...	1800	1232	813	2839	0	11463	0.22%	5.2/sec	17.8
/position/lis...	1800	1167	748	2770	1	10021	0.22%	5.2/sec	20.7
/company/d...	1800	1107	734	2590	0	10767	0.11%	5.3/sec	19.0
TOTAL	108000	336	87	864	0	13616	0.22%	305.5/sec	23215.4

Performance thread results: 18,327 per minute.

Graph Results

Name: Graph Results

Comments:

Write results to file / Read from file

Filename [   ] [Browse...] Log/Display Only: ☐ Errors ☐ Successes [Configure]

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

827 ms

0 ms

No of Samples 108000	**Latest Sample** 15		**Average** 336
Deviation 615	**Throughput** 18,327.399/minute		**Median** 87

Computer performance:

Analysis results:

100 users and 10 loops: the application runs perfectly

150 users and 10 loops: the application runs without errors but the 90% line shows that listing the positions and companies requires a lot of time.

180 users and 10 loops: it begins to happen some errors, after reviewing the computer analysis results, we believe is a processor bottleneck problem.

7. An actor who is not authenticated must be able to:

> 4. Search for a position using a single key word that must be contained in its title, its description, its profile, its skills, its technologies, or the name of the corresponding company.

Thread Group

Name: Thread Group
Comments:

Action to be taken after a Sampler error

( ) Continue ( ) Start Next Thread Loop ( ) Stop Thread ( ) Stop Test ( ) Stop Test Now

Thread Properties
Number of Threads (users): 100
Ramp-Up Period (in seconds): 1
Loop Count: [ ] Forever 10
[ ] Delay Thread creation until needed
[ ] Scheduler

Performance test 90% results: Total 3,148s.
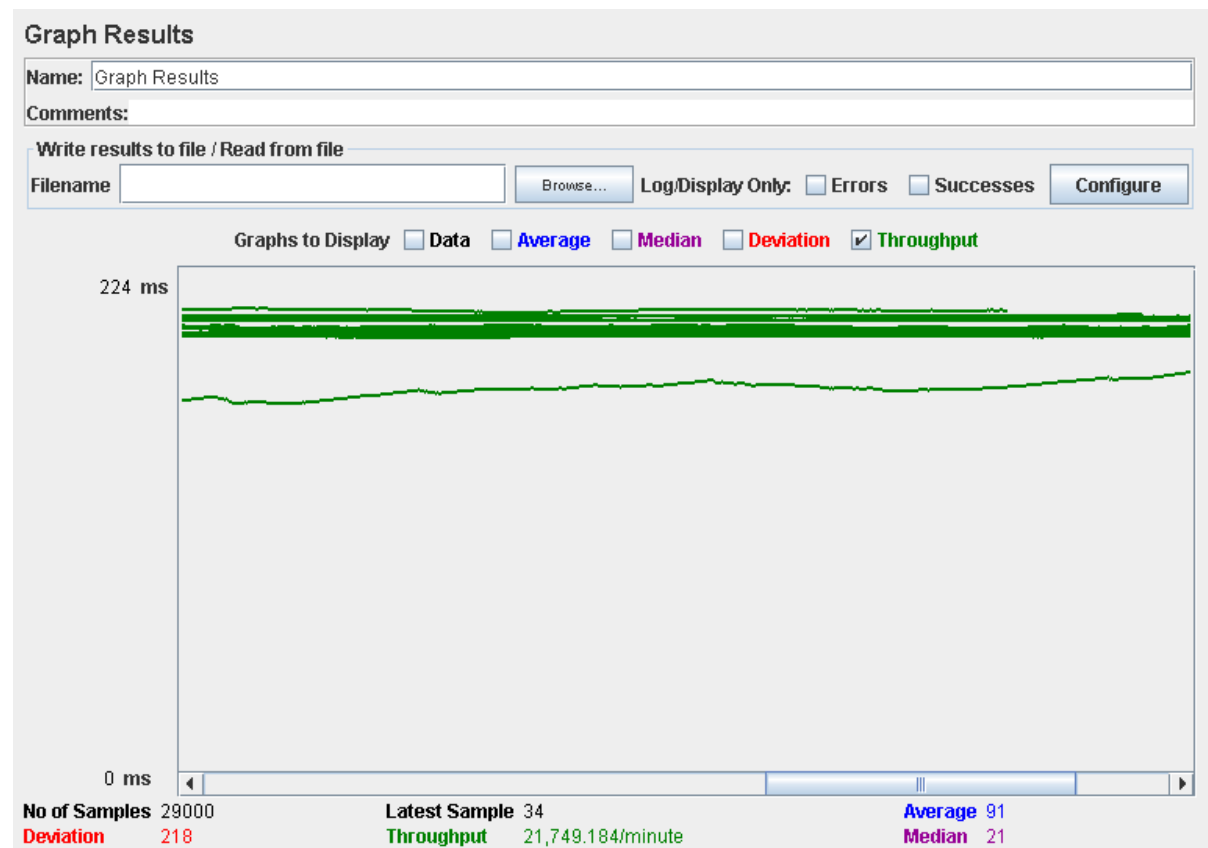
Aggregate Report

Name: Aggregate Report
Comments:

Write results to file / Read from file
Filename [   ] Browse... Log/Display Only: [ ] Errors [ ] Successes [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/images/arrow_down.png	1000	17	13	29	2	298	0.00%	13.4/s...	6.7
/position/list.do	2000	474	290	1094	7	3118	0.00%	25.9/s...	104.5
/scripts/jquery.js	3000	112	93	219	8	751	0.00%	38.0/s...	10237...
/styles/common.css	3000	17	12	34	1	474	0.00%	38.0/s...	24.1
/styles/displaytag.css	3000	16	12	31	1	345	0.00%	38.0/s...	115.7
/styles/jmenu.css	3000	15	11	27	1	606	0.00%	38.0/s...	73.7
/scripts/jmenu.js	3000	17	14	32	2	308	0.00%	38.0/s...	404.1
/scripts/jquery-ui.js	3000	173	144	345	12	848	0.00%	38.0/s...	17277...
/images/arrow_off.png	2000	14	11	26	1	490	0.00%	25.9/s...	12.9
/images/logo.png	3000	16	13	30	2	518	0.00%	38.0/s...	599.4
/	1000	432	245	1008	5	3323	0.00%	13.2/s...	38.6
/success.txt	2000	52	28	50	13	2756	0.00%	26.4/s...	9.9
TOTAL	29000	91	21	223	1	3323	0.00%	362.5/...	28507...

Performance thread results: 21,749 per minute.

Performance test 90% results: Total 10,302s.

Aggregate Report

Name: Aggregate Report
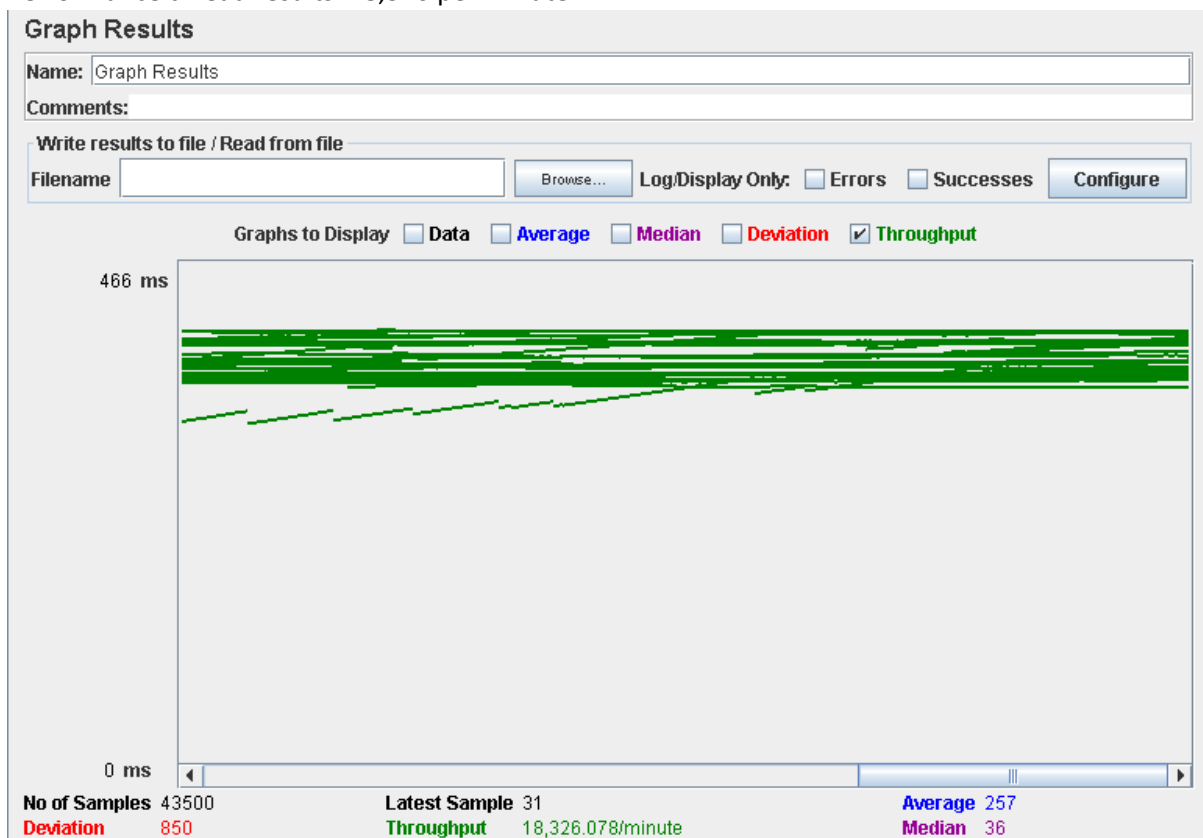
Comments:

Write results to file / Read from file

Filename [ ] Browse... Log/Display Only: ☐ Errors ☐ Successes [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/images/arrow_down.png	1500	71	24	112	1	5336	0.00%	11.0/s...	5.6
/position/list.do	3000	1694	910	4328	6	19952	0.00%	21.5/s...	86.9
/scripts/jquery.js	4500	204	157	379	8	2982	0.00%	32.0/s...	8606.8
/styles/common.css	4500	40	21	80	1	2201	0.00%	32.0/s...	20.5
/styles/displaytag.css	4500	46	23	92	1	1967	0.00%	32.0/s...	97.6
/styles/jmenu.css	4500	39	22	73	1	1227	0.00%	32.0/s...	62.3
/scripts/jmenu.js	4500	45	26	88	2	1001	0.00%	32.0/s...	340.0
/scripts/jquery-ui.js	4500	292	235	538	13	2578	0.00%	32.0/s...	14528...
/images/arrow_off.png	3000	37	20	80	1	640	0.00%	21.5/s...	10.9
/images/logo.png	4500	39	24	74	2	1392	0.00%	32.0/s...	504.4
/	1500	1677	989	4386	5	16470	0.00%	10.9/s...	32.0
/success.txt	3000	63	31	72	13	2294	0.00%	21.8/s...	8.2
TOTAL	43500	257	36	431	1	19952	0.00%	305.4/...	24022...

Performance thread results: 18,326 per minute.

Graph Results

Name: Graph Results

Comments:

Write results to file / Read from file

Filename [ ] Browse... Log/Display Only: ☐ Errors ☐ Successes [Configure]

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

No of Samples 43500   **Latest Sample** 31   **Average** 257

Deviation 850   **Throughput** 18,326.078/minute   **Median** 36

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

◉ Continue ○ Start Next Thread Loop ○ Stop Thread ○ Stop Test ○ Stop Test Now

Thread Properties

Number of Threads (users): 180

Ramp-Up Period (in seconds): 1

Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 13,832

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file
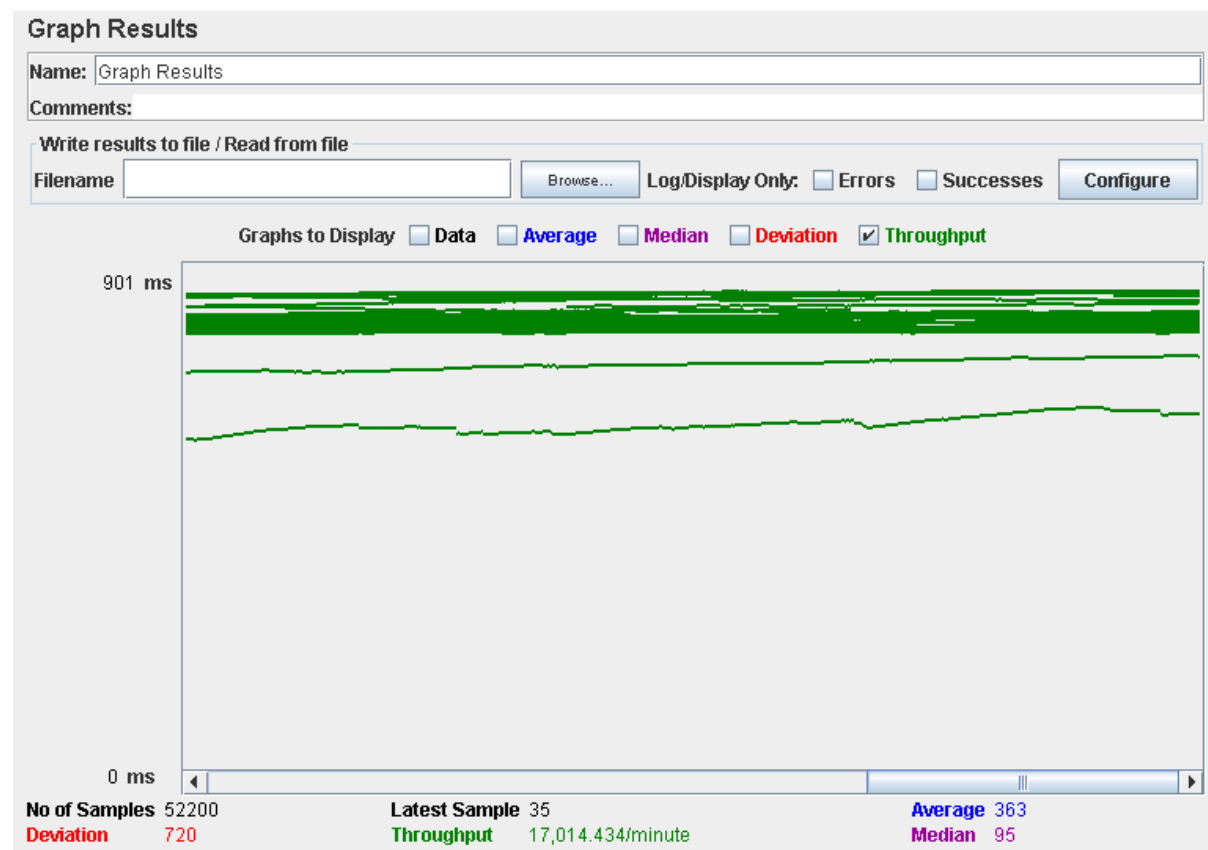
Filename [   ] Browse... Log/Display Only: ☐ Errors ☐ Successes [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/images/arrow_down.png	1800	194	41	589	2	2362	0.00%	10.1/s...	5.1
/position/list.do	3600	1409	850	3363	7	17045	0.00%	19.9/s...	80.4
/scripts/jquery.js	5400	402	304	864	8	2982	0.00%	29.6/s...	7971.7
/styles/common.css	5400	192	48	576	1	2353	0.00%	29.6/s...	19.0
/styles/displaytag.css	5400	206	53	652	1	2387	0.00%	29.6/s...	90.3
/styles/jmenu.css	5400	152	42	495	1	2521	0.00%	29.6/s...	57.6
/scripts/jmenu.js	5400	169	53	528	2	2512	0.00%	29.6/s...	314.7
/scripts/jquery-ui.js	5400	597	499	1235	12	2667	0.00%	29.6/s...	13448...
/images/arrow_off.png	3600	163	42	521	1	2368	0.00%	19.9/s...	10.1
/images/logo.png	5400	151	48	491	1	2436	0.00%	29.6/s...	466.9
/	1800	1403	796	3476	4	13994	0.00%	10.1/s...	29.6
/success.txt	3600	92	43	145	14	4870	0.00%	20.4/s...	7.7
TOTAL	52200	363	95	917	1	17045	0.00%	283.6/...	22303...

Performance thread results: 17,014 per minute

Graph Results

Name:	Graph Results
Comments:	

Write results to file / Read from file

Filename		Browse...	Log/Display Only: ☐ Errors ☐ Successes	Configure

Graphs to Display ☐ Data   ☐ Average   ☐ Median   ☐ Deviation   ☑ Throughput

901 ms

0 ms

No of Samples 52200	**Latest Sample** 35	**Average** 363
Deviation 720	**Throughput** 17,014.434/minute	**Median** 95

Thread Group

Name:	Thread Group
Comments:	

Action to be taken after a Sampler error

◉ Continue   ○ Start Next Thread Loop   ○ Stop Thread   ○ Stop Test   ○ Stop Test Now

Thread Properties

Number of Threads (users): 190

Ramp-Up Period (in seconds): 1

Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 12,037

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file

Filename [   ] [Browse...]   Log/Display Only: ☐ Errors ☐ Successes   [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/images/arrow_down.png	1900	169	39	550	2	3997	0.05%	11.1/s...	5.7
/position/list.do	3800	1288	760	3132	1	13984	0.11%	22.1/s...	89.1
/scripts/jquery.js	5700	385	283	876	1	2481	0.18%	32.8/s...	8828.6
/styles/common.css	5700	189	51	601	0	2510	0.32%	32.8/s...	21.2
/styles/displaytag.css	5700	200	56	616	1	2283	0.39%	32.8/s...	100.0
/styles/jmenu.css	5700	158	42	529	1	1804	0.26%	32.8/s...	63.9
/scripts/jmenu.js	5700	172	52	561	1	2027	0.28%	32.8/s...	348.3
/scripts/jquery-ui.js	5700	533	435	1085	1	3112	0.25%	32.8/s...	14882...
/images/arrow_off.png	3800	157	37	538	1	2508	0.32%	22.1/s...	11.2
/images/logo.png	5700	149	45	486	1	1846	0.16%	32.8/s...	517.2
/	1900	1238	739	2952	1	12525	0.11%	11.2/s...	32.9
/success.txt	3800	89	35	111	13	5552	0.00%	22.5/s...	8.5
TOTAL	55100	339	92	836	0	13984	0.22%	313.9/...	24632...

Performance thread results: 18,931 per minute.

Graph Results

Name: Graph Results

Comments:

Write results to file / Read from file

Filename [   ] [Browse...]   Log/Display Only: ☐ Errors ☐ Successes   [Configure]

Graphs to Display ☐ Data ☐ **Average** ☐ **Median** ☐ **Deviation** ☑ **Throughput**

960 ms

0 ms

No of Samples 55100	**Latest Sample** 129	**Average** 339
Deviation 659	**Throughput** 18,831.92/minute	**Median** 92

Computer performance:
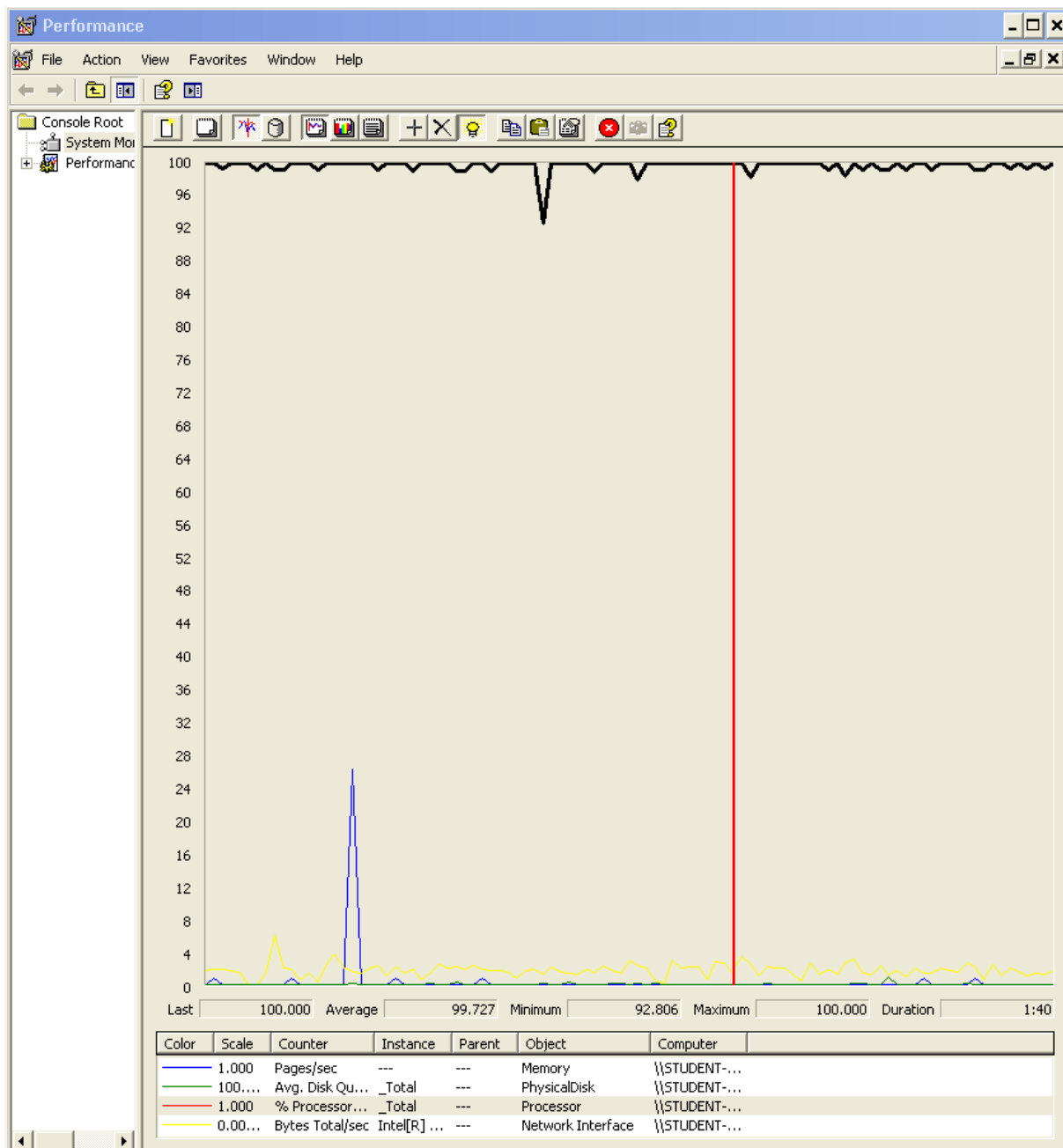
Analysis results:

100 users and 10 loops: the application runs perfectly

150 users and 10 loops: the application runs without errors but the 90% line shows that listing the finder and going to the welcome view requires a lot of time.

180 users and 10 loops: the application runs almost the same as with 150 users and 10 loops

190 users and 10 loops: it begins to appear some errors, we captured the computer performance for that test and we think that it was a bottleneck problem with the processor.

7. An actor who is not authenticated must be able to:

    1. Register to the system as a company.

8. An actor who is authenticated must be able to:

    1. Do the same as an actor who is not authenticated, but register to the system
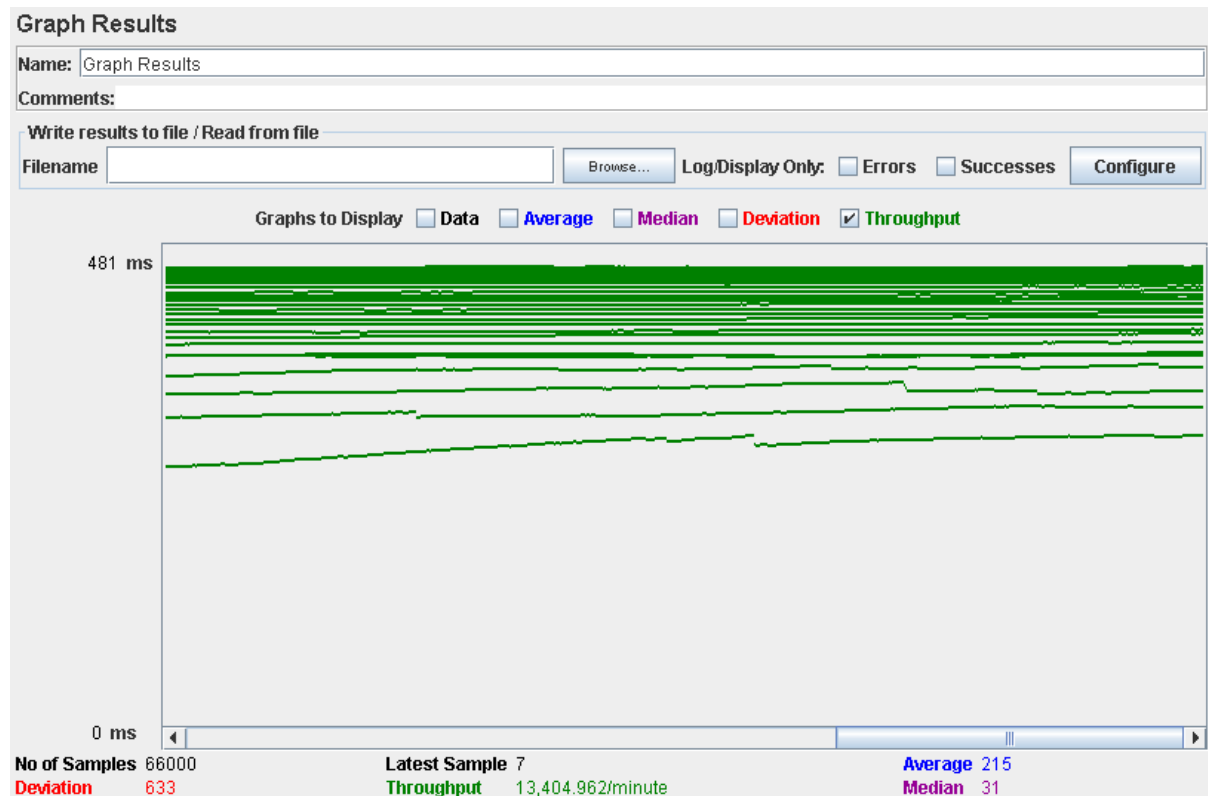
    2. Edit his or her personal data.

Thread Group

Name: Thread Group
Comments:

Action to be taken after a Sampler error

◉ Continue   ○ Start Next Thread Loop   ○ Stop Thread   ○ Stop Test   ○ Stop Test Now

Thread Properties
Number of Threads (users): 100
Ramp-Up Period (in seconds): 1
Loop Count: ☐ Forever   10
☐ Delay Thread creation until needed
☐ Scheduler

Performance test 90% results: Total 17,575s.

Aggregate Report

Name: Aggregate Report
Comments:

Write results to file / Read from file
Filename   [Browse...]   Log/Display Only: ☐ Errors   ☐ Successes   [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
/	2000	967	537	2485	6	9418	0.00%	6.9/sec	22.6
/scripts/jque...	7000	173	124	369	12	1522	0.00%	23.8/sec	10833.9
/scripts/jque...	7000	121	84	264	8	1255	0.00%	23.9/sec	6436.5
/styles/jmen...	7000	29	16	62	1	1385	0.00%	23.9/sec	46.4
/styles/displ...	7000	30	16	64	1	1155	0.00%	23.9/sec	72.8
/scripts/jme...	7000	34	19	68	2	782	0.00%	23.9/sec	254.5
/styles/com...	7000	29	16	61	1	1121	0.00%	24.0/sec	15.2
/images/log...	7000	31	17	64	2	962	0.00%	24.0/sec	378.6
/images/arro...	6000	26	14	54	1	751	0.00%	20.5/sec	10.3
/company/cr...	2000	1080	714	2449	12	16313	0.00%	7.0/sec	52.2
/welcome/in...	2000	829	455	2084	6	11085	0.00%	7.0/sec	22.6
/security/logi...	1000	172	77	452	5	1584	0.00%	3.6/sec	10.9
/j_spring_se...	1000	1683	1043	3933	11	15990	0.00%	3.6/sec	13.6
/company/ed...	2000	1244	867	3023	8	11673	0.00%	7.2/sec	39.9
/j_spring_se...	1000	824	480	2143	8	11526	0.00%	3.7/sec	11.8
TOTAL	66000	215	31	480	1	16313	0.00%	223.4/sec	18085.8

Performance thread results: 13,404 per minute.

Graph Results

Name: Graph Results
Comments:

Write results to file / Read from file
Filename: _____ Browse... Log/Display Only: ☐ Errors ☐ Successes [Configure]

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

| No of Samples | 66000 | | Latest Sample | 7 | | Average | 215 |
| Deviation | 633 | | Throughput | 13,404.962/minute | | Median | 31 |

Thread Group

Name: Thread Group
Comments:

Action to be taken after a Sampler error
◉ Continue ○ Start Next Thread Loop ○ Stop Thread ○ Stop Test ○ Stop Test Now

Thread Properties
Number of Threads (users): 150
Ramp-Up Period (in seconds): 1
Loop Count: ☐ Forever 10
☐ Delay Thread creation until needed
☐ Scheduler

Performance test 90% results: Total 58,645s.

Aggregate Report

Name: Aggregate Report
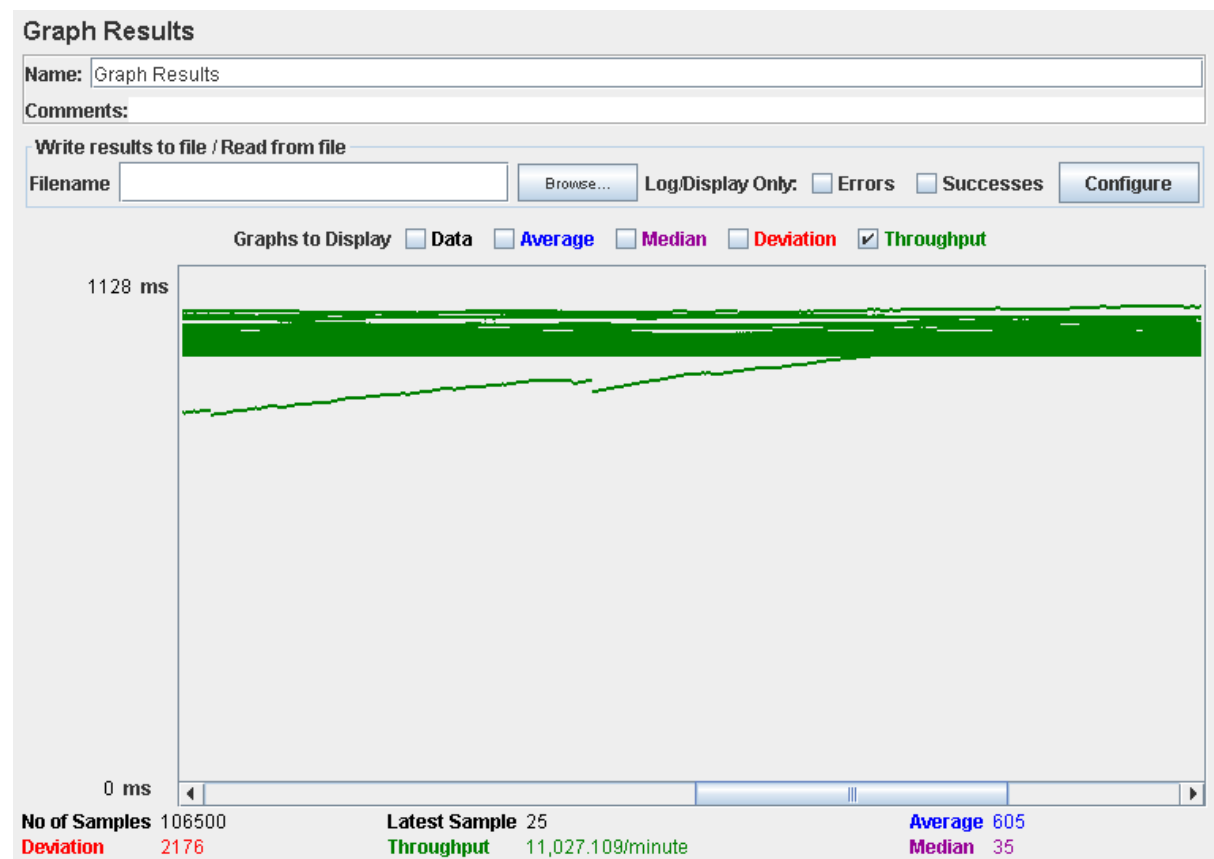
Comments:

Write results to file / Read from file

Filename: [ ] Browse... Log/Display Only: ☐ Errors ☐ Successes [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
/	2999	3470	2110	8501	4	40232	0.00%	5.2/sec	17.3
/scripts/jqu...	10494	189	144	357	13	2927	0.00%	18.4/sec	8339.0
/scripts/jqu...	10494	124	95	233	9	2019	0.00%	18.4/sec	4944.9
/styles/jme...	10494	38	20	67	1	2679	0.00%	18.4/sec	35.9
/styles/displ...	10494	35	21	65	2	2069	0.00%	18.4/sec	56.3
/scripts/jme...	10494	38	23	71	2	1326	0.00%	18.4/sec	196.1
/styles/com...	10494	37	20	67	1	2104	0.00%	18.4/sec	12.0
/images/log...	10494	35	21	63	2	2068	0.00%	18.4/sec	290.9
/images/arr...	8993	32	19	59	1	1744	0.00%	15.8/sec	8.2
/company/c...	2999	3098	1842	7623	7	27866	0.00%	5.3/sec	39.4
/welcome/i...	2997	3427	2104	8243	4	38757	0.00%	5.3/sec	17.3
/security/log...	1499	110	55	273	4	1332	0.00%	2.7/sec	8.3
/j_spring_s...	1499	6590	5060	14196	10	55958	0.00%	2.7/sec	10.2
/company/e...	2997	4661	3239	11112	9	52737	0.00%	5.5/sec	30.5
/j_spring_s...	1498	3112	1740	7660	8	34124	0.00%	2.8/sec	9.0
/success.txt	7490	37	32	55	16	1117	0.00%	13.9/sec	5.2
TOTAL	106429	605	35	1048	1	55958	0.00%	186.0/sec	14007.4

Performance thread results: 11,027 per minute.

Graph Results

Name: Graph Results

Comments:

Write results to file / Read from file

Filename: [ ] Browse... Log/Display Only: ☐ Errors ☐ Successes [Configure]

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

1128 ms

0 ms

| No of Samples | 106500 | Latest Sample | 25 | Average | 605 |
| Deviation | 2176 | Throughput | 11,027.109/minute | Median | 35 |

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

( ) Continue   ( ) Start Next Thread Loop   ( ) Stop Thread   ( ) Stop Test   ( ) Stop Test Now

Thread Properties

Number of Threads (users): 170

Ramp-Up Period (in seconds): 1

Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 67,730s

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file

**Filename** [   ] Browse...   Log/Display Only: ☐ Errors ☐ Successes   [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
/	3400	3603	2102	8628	3	45487	0.03%	5.2/sec	17.2
/scripts/jqu...	11900	284	186	578	1	4394	0.05%	18.2/sec	8266.3
/scripts/jqu...	11900	206	129	427	1	3466	0.03%	18.2/sec	4891.0
/styles/jme...	11900	81	28	181	0	2416	0.03%	18.2/sec	35.6
/styles/displ...	11900	79	29	177	1	2810	0.03%	18.2/sec	55.6
/scripts/jme...	11900	84	32	185	1	2321	0.03%	18.2/sec	193.3
/styles/com...	11900	80	29	177	1	2529	0.03%	18.2/sec	11.8
/images/log...	11900	70	29	146	1	2643	0.03%	18.2/sec	287.4
/images/arr...	10200	64	25	130	1	2335	0.02%	15.6/sec	8.0
/company/c...	3400	3616	2128	8939	7	86009	0.00%	5.2/sec	39.0
/welcome/i...	3400	3754	2299	9183	1	38112	0.03%	5.2/sec	17.1
/security/log...	1700	140	61	361	4	2637	0.06%	2.6/sec	8.2
/j_spring_s...	1700	7091	5338	15132	11	56978	0.06%	2.7/sec	10.1
/company/e...	3400	5369	3453	12781	9	62155	0.06%	5.4/sec	29.9
/j_spring_s...	1700	3688	1930	9319	3	51307	0.00%	2.7/sec	8.8
/success.txt	8500	43	36	63	18	1861	0.00%	13.6/sec	5.1
TOTAL	120700	710	53	1323	0	86009	0.03%	184.0/sec	13846.5

Performance thread results: 11,670 per minute.

Computer performance:
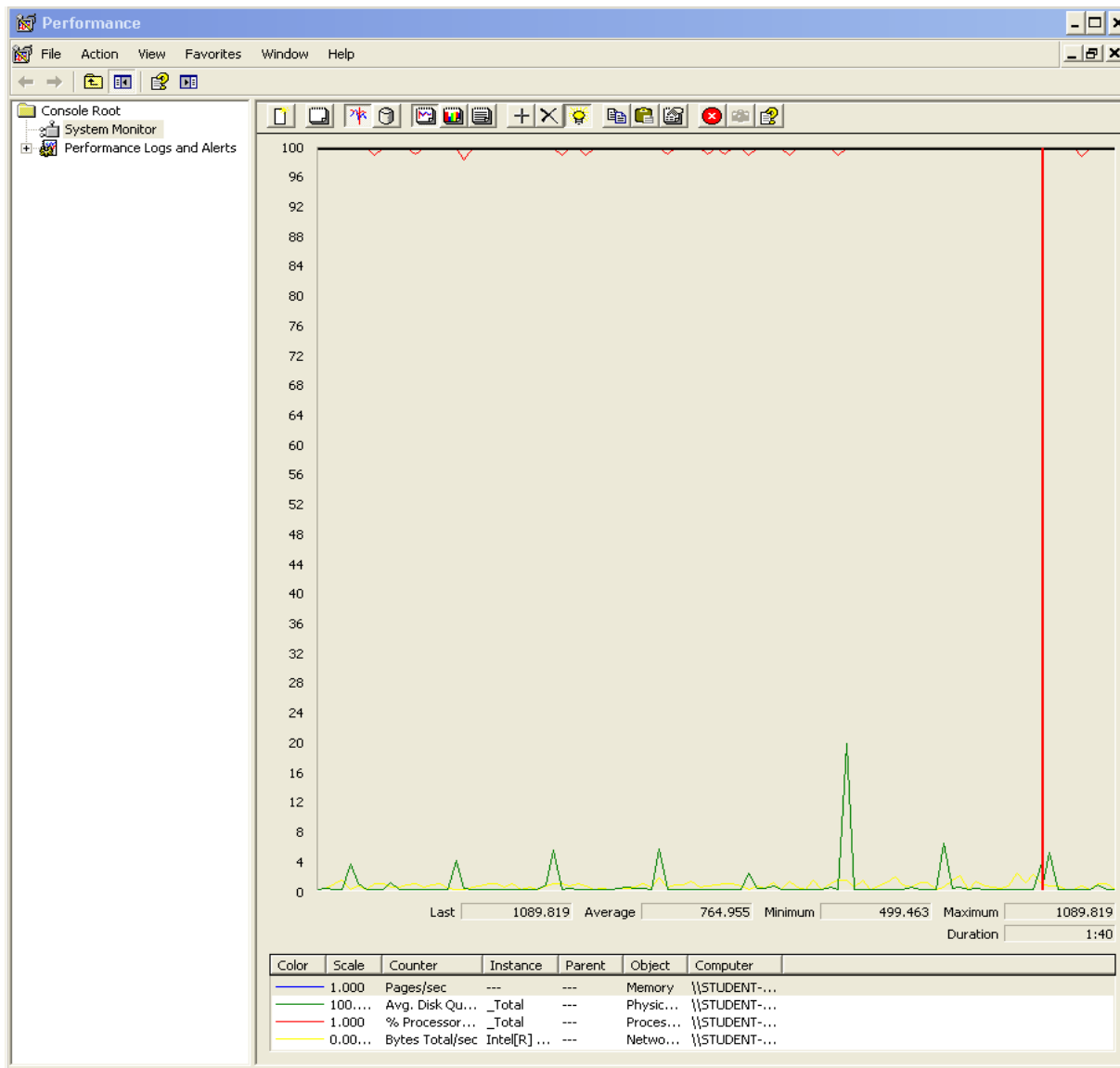
Analysis results:

100 users and 10 loops: the application runs without errors but the edit and security check times are a bit high

150 users and 10 loops: the application runs without errors but the times are really high.

170 users and 10 loops: the application begins to have problems, the computer performance shows complications, we think is a memory bottleneck problem.

9. An actor who is authenticated as a company must be able to:

1. Manage their positions, which includes listing, showing, creating, updating, and deleting them. Positions can be saved in draft mode; they are not available publicly until they are saved in final mode. Once a position is saved in final mode, it cannot be further edited, but it can be cancelled. A position cannot be saved in final mode unless there are at least two problems associated with it.

Thread Group

Name:	Thread Group
Comments:	

Action to be taken after a Sampler error

◉ Continue ○ Start Next Thread Loop ○ Stop Thread ○ Stop Test ○ Stop Test Now

Thread Properties

Number of Threads (users): 100

Ramp-Up Period (in seconds): 1
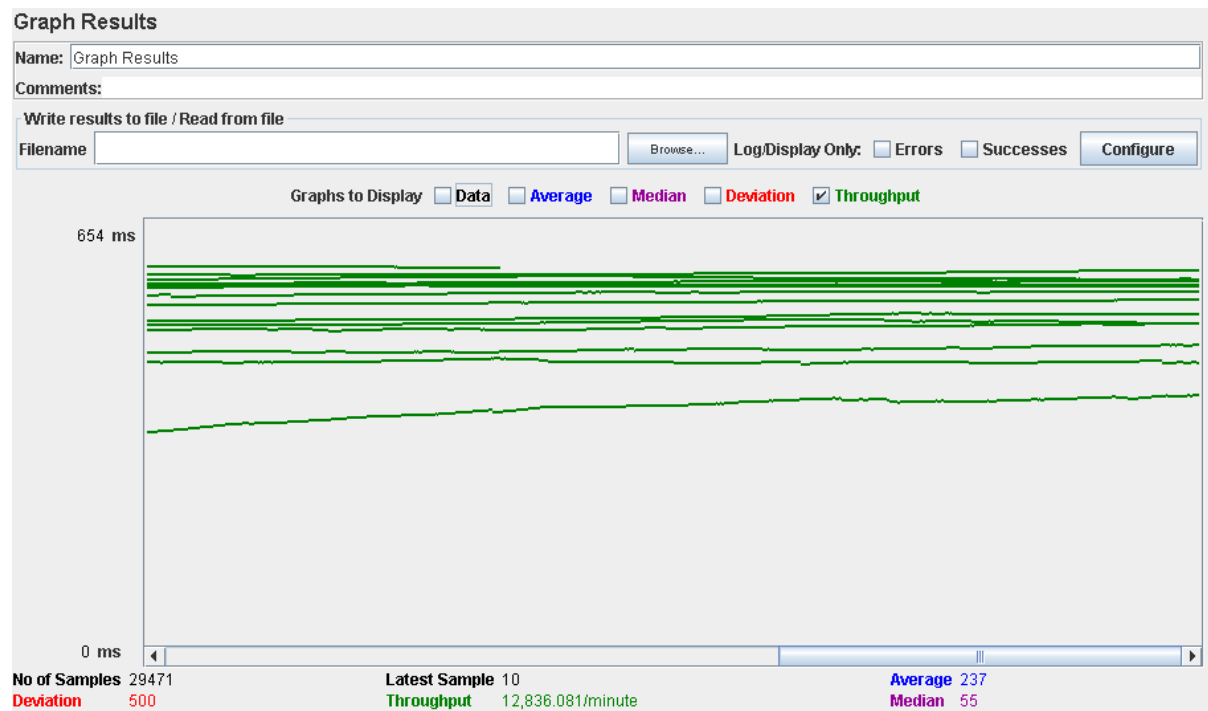
Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 13,727s.

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file

Filename [   ] Browse... Log/Display Only: ☐ Errors ☐ Successes Configure

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
/position/com...	1049	997	575	2381	7	8219	0.00%	8.5/sec	92.7
/scripts/jquery-...	2754	449	386	860	14	2050	0.00%	22.5/sec	10242.3
/styles/jmenu....	2751	61	32	123	2	1167	0.00%	22.6/sec	43.9
/scripts/jmenu...	2753	72	37	152	2	2040	0.00%	22.7/sec	241.0
/scripts/jquery.js	2753	284	228	556	9	1408	0.00%	22.7/sec	6108.2
/styles/displayt...	2752	59	31	113	2	1464	0.00%	22.7/sec	69.0
/styles/commo...	2752	64	31	125	1	2092	0.00%	22.7/sec	14.4
/images/arrow...	1350	59	28	117	2	935	0.00%	11.1/sec	5.5
/images/logo....	2751	62	34	122	2	1691	0.00%	22.7/sec	358.3
/position/com...	384	793	504	2086	13	6220	0.00%	3.2/sec	38.4
/position/com...	1022	960	625	2362	11	6509	0.00%	8.7/sec	72.6
/welcome/inde...	690	920	815	2075	10	5677	0.00%	5.9/sec	17.3
/images/arrow...	687	62	32	111	2	1137	0.00%	5.9/sec	3.0
/position/com...	302	1242	976	2565	23	7564	0.00%	3.3/sec	10.5
/success.txt	906	49	37	79	18	484	0.00%	10.0/sec	3.7
TOTAL	25656	249	56	664	1	8219	0.00%	208.3/sec	17127.5

Performance thread results: 12,836 per minute.

Graph Results

Name: Graph Results

Comments:

Write results to file / Read from file

Filename: [   ] Browse... Log/Display Only: ☐ Errors ☐ Successes [Configure]

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

654 ms

0 ms

No of Samples 29471	**Latest Sample** 10	**Average** 237
Deviation 500	**Throughput** 12,836.081/minute	**Median** 55

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

● Continue ○ Start Next Thread Loop ○ Stop Thread ○ Stop Test ○ Stop Test Now

Thread Properties

Number of Threads (users): 150

Ramp-Up Period (in seconds): 1

Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 13,570s.

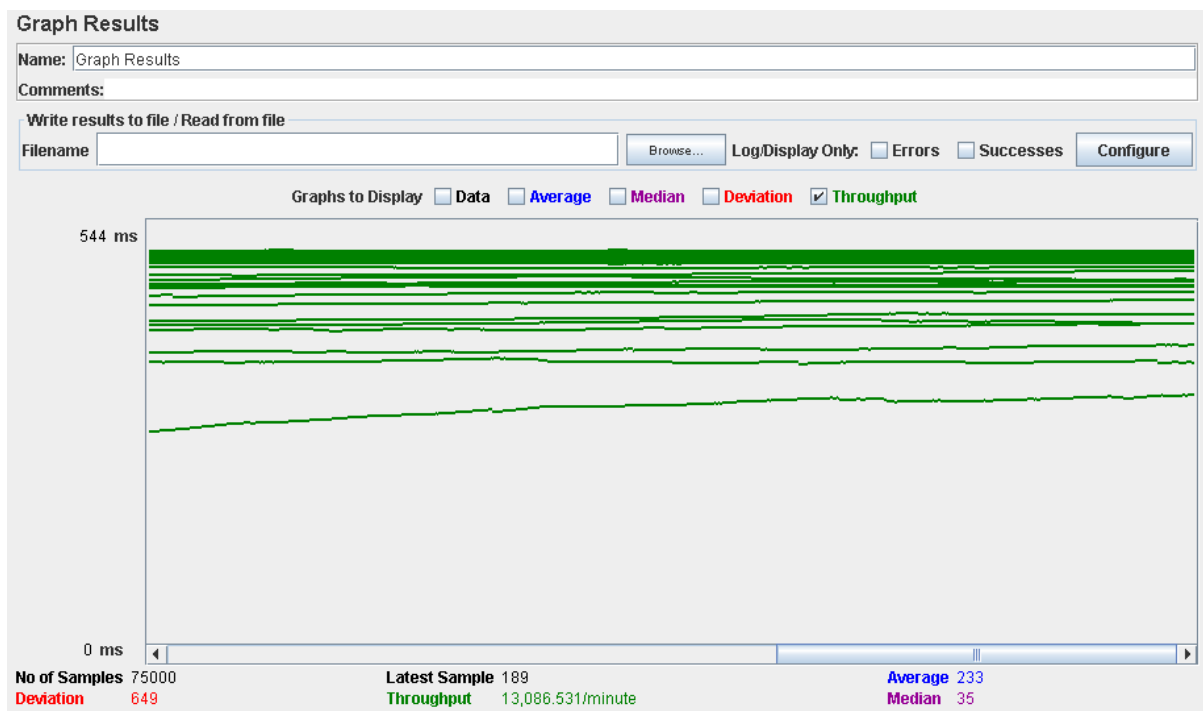**Aggregate Report**

Name: Aggregate Report

Comments:

Write results to file / Read from file

Filename: [   ] Browse... Log/Display Only: ☐ Errors ☐ Successes [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
/position/com...	3000	1002	551	2511	5	18502	0.00%	8.8/sec	95.5
/scripts/jquery-...	8000	304	234	651	10	2050	0.00%	23.4/sec	10623.3
/styles/jmenu....	8000	35	19	67	1	1167	0.00%	23.4/sec	45.4
/scripts/jmenu...	8000	42	23	77	2	2040	0.00%	23.4/sec	249.0
/scripts/jquery.js	8000	187	137	399	8	1408	0.00%	23.4/sec	6310.7
/styles/displayt...	8000	35	18	68	2	1464	0.00%	23.4/sec	71.3
/styles/commo...	8000	37	19	65	1	2092	0.00%	23.4/sec	14.9
/images/arrow...	4000	34	17	64	2	935	0.00%	11.7/sec	5.8
/images/logo....	8000	38	21	74	2	1691	0.00%	23.4/sec	369.8
/position/com...	1000	987	506	2494	7	11070	0.00%	3.0/sec	36.2
/position/com...	3000	1231	725	3017	7	11531	0.00%	9.0/sec	74.1
/welcome/inde...	2000	1143	882	2555	9	11623	0.00%	6.0/sec	17.6
/images/arrow...	2000	35	18	68	1	1137	0.00%	6.0/sec	3.0
/position/com...	1000	1716	1247	3699	14	13776	0.00%	3.2/sec	10.1
/success.txt	3000	40	32	61	17	484	0.00%	9.6/sec	3.6
TOTAL	75000	233	35	533	1	18502	0.00%	218.1/sec	17823.7

Performance thread results: 13,088 per minute.

Graph Results

Name: Graph Results
Comments:

Write results to file / Read from file
Filename: _____ [Browse...] Log/Display Only: ☐ Errors ☐ Successes [Configure]

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

544 ms

0 ms

| No of Samples | 75000 | Latest Sample | 189 | Average | 233 |
| Deviation | 649 | Throughput | 13,086.531/minute | Median | 35 |

Thread Group

Name: Thread Group
Comments:

Action to be taken after a Sampler error
◉ Continue ○ Start Next Thread Loop ○ Stop Thread ○ Stop Test ○ Stop Test Now

Thread Properties
Number of Threads (users): 180
Ramp-Up Period (in seconds): 1
Loop Count: ☐ Forever 10
☐ Delay Thread creation until needed
☐ Scheduler

Performance test 90% results: Total 53,814s.

Aggregate Report

Name: Aggregate Report
Comments:

Write results to file / Read from file
Filename: _____ [Browse...] Log/Display Only: ☐ Errors ☐ Successes [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
/position/company/list.do	4876	3396	2180	8202	6	34970	0.00%	7.9/sec	85.5
/scripts/jquery-ui.js	12903	387	285	816	12	5717	0.00%	20.8/sec	9433.0
/styles/jmenu.css	12901	120	44	303	2	5294	0.00%	20.8/sec	40.6
/scripts/jmenu.js	12903	121	51	300	2	5281	0.00%	20.8/sec	220.9
/scripts/jquery.js	12903	273	188	593	9	2336	0.00%	20.8/sec	5591.5
/styles/displaytag.css	12901	110	44	281	2	3393	0.00%	20.8/sec	63.5
/styles/common.css	12903	120	46	296	2	4541	0.01%	20.8/sec	13.5
/images/arrow_off.png	6407	98	40	246	2	5183	0.00%	10.3/sec	5.3
/images/logo.png	12901	103	45	259	2	4501	0.00%	20.8/sec	327.7
/position/company/create.do	1669	3198	2041	8011	7	30492	0.00%	2.7/sec	32.2
/position/company/edit.do	4854	4740	3233	11226	4	38718	0.02%	7.9/sec	65.2
/welcome/index.do	3225	3667	2416	8560	7	32395	0.00%	5.2/sec	15.4
/images/arrow_down.png	3222	94	38	237	2	1651	0.00%	5.2/sec	2.7
/position/company/delete.do	1531	6930	5411	14317	31	35723	0.00%	2.6/sec	8.2
/success.txt	4593	56	38	77	17	4208	0.00%	7.7/sec	2.9
TOTAL	120692	700	91	1308	2	38718	0.00%	194.1/sec	15902.5

Performance thread results: 11,690 per minute.
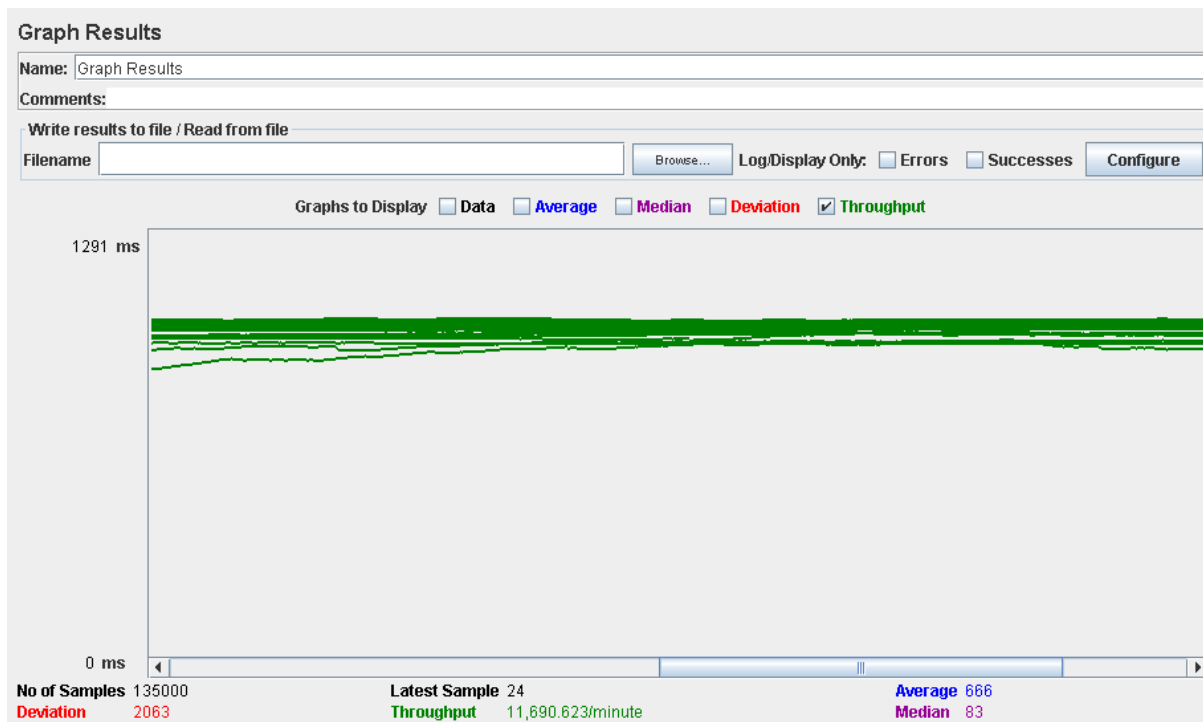
Computer performance:
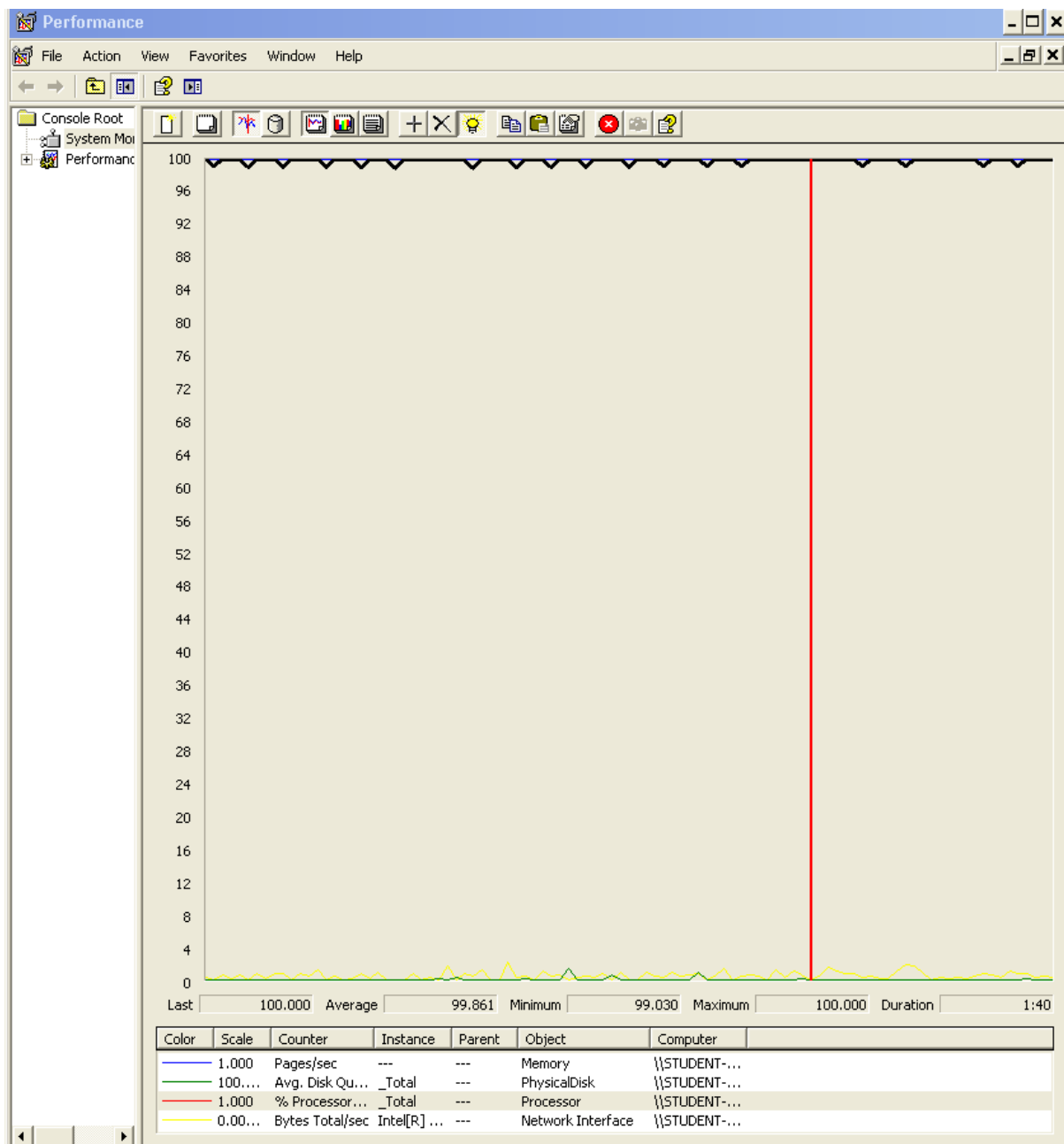
Analysis results:

100 users and 10 loops: the application runs perfectly

150 users and 10 loops: the application runs without errors but the times are a bit high (3600ms).

180 users and 10 loops: the application begins to have errors, we believe is a memory or a processors bottleneck problem.

9.2. Manage their database of problems, which includes listing, showing, creating, updating, and deleting them. Problems can be saved in draft mode; once they are save in final mode, they cannot not be edited.

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

◉ Continue ○ Start Next Thread Loop ○ Stop Thread ○ Stop Test ○ Stop Test Now

Thread Properties

Number of Threads (users): 100

Ramp-Up Period (in seconds): 1

Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

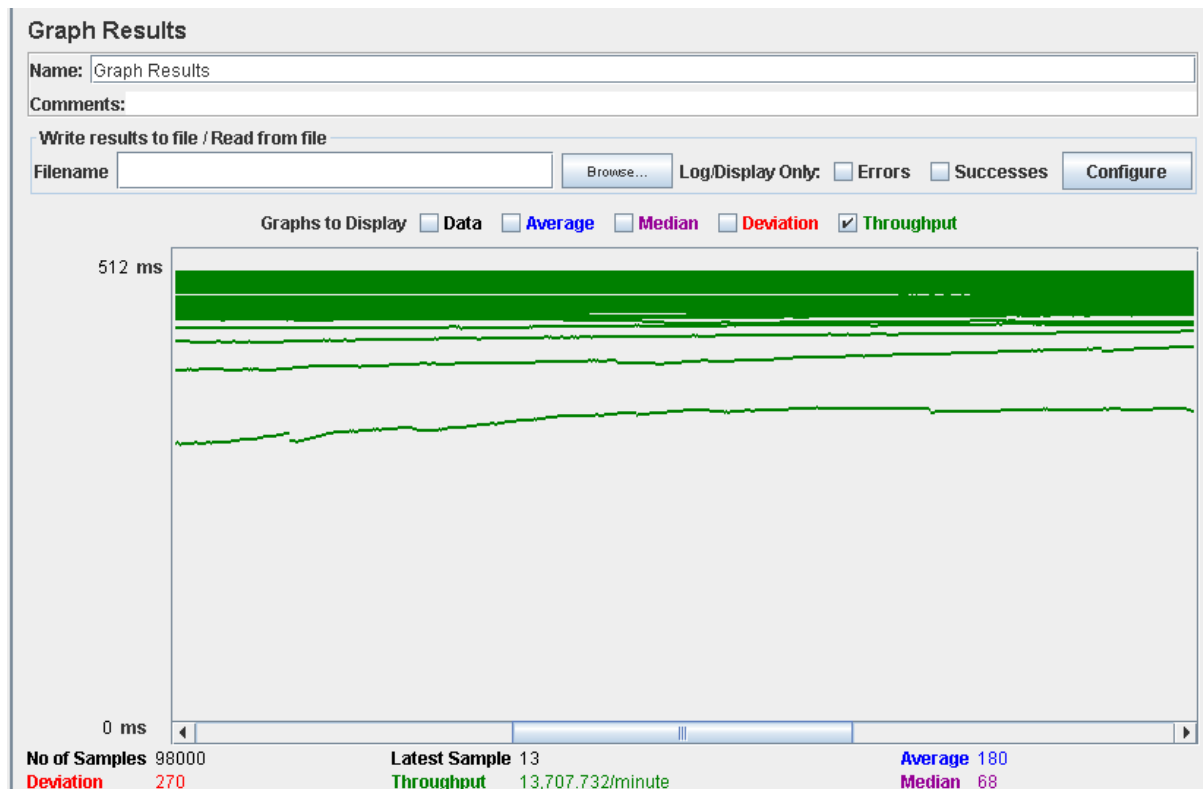Performance test 90% results: Total 7,422s.

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file

Filename _____ Browse... Log/Display Only: ☐ Errors ☐ Successes Configure

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/problem/company/list.do	4000	334	205	783	4	4912	0.00%	9.4/sec	31.0
/scripts/jmenu.js	11000	90	51	173	2	2286	0.00%	25.7/...	272.7
/styles/common.css	11000	84	44	173	1	1998	0.00%	25.7/...	16.3
/scripts/jquery.js	11000	302	231	636	7	2411	0.00%	25.7/...	6911.1
/scripts/jquery-ui.js	11000	441	340	952	12	2946	0.00%	25.7/...	1165...
/styles/displaytag.css	11000	83	42	172	1	2372	0.00%	25.7/...	78.1
/styles/jmenu.css	11000	80	43	160	2	2275	0.00%	25.7/...	49.8
/images/logo.png	11000	87	50	169	2	1595	0.00%	25.7/...	404.6
/images/arrow_off.png	5000	77	41	153	2	1675	0.00%	11.7/...	5.8
/problem/company/create.do	1000	336	215	800	9	3101	0.00%	2.4/sec	8.0
/problem/company/edit.do	3000	317	212	755	5	3211	0.00%	7.2/sec	23.3
/welcome/index.do	3000	334	192	846	7	3488	0.00%	7.1/sec	20.9
/images/arrow_down.png	3000	78	40	150	2	1673	0.00%	7.1/sec	3.6
/problem/company/display.do	1000	290	180	739	9	2340	0.00%	2.5/sec	8.1
/problem/company/delete.do	1000	298	185	761	8	2402	0.00%	2.5/sec	8.3
TOTAL	98000	180	68	505	1	4912	0.00%	228.5...	1948...

Performance thread results: 13,707 per minute.

Performance test 90% results: Total 11,814s.

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file

Filename [   ] [Browse...] Log/Display Only: ☐ Errors ☐ Successes [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/problem/company/list.do	5600	501	349	1138	4	4473	0.00%	9.2/sec	30.6
/scripts/jmenu.js	15400	175	85	472	2	3895	0.00%	25.2/...	267.5
/styles/common.css	15400	160	68	462	1	3224	0.00%	25.2/...	16.1
/scripts/jquery.js	15400	497	424	958	8	5253	0.00%	25.2/...	6776.0
/scripts/jquery-ui.js	15400	731	645	1360	13	4453	0.00%	25.2/...	1142...
/styles/displaytag.css	15400	164	71	470	1	2455	0.00%	25.2/...	76.7
/styles/jmenu.css	15400	164	73	462	2	2263	0.00%	25.2/...	48.9
/images/logo.png	15400	162	80	425	2	3076	0.00%	25.2/...	396.9
/images/arrow_off.png	7000	145	65	399	2	2589	0.00%	11.4/...	5.7
/problem/company/create.do	1400	493	357	1072	7	4179	0.00%	2.4/sec	7.9
/problem/company/edit.do	4200	471	345	1045	4	6171	0.00%	7.1/sec	23.0
/welcome/index.do	4200	453	288	997	6	5590	0.00%	7.0/sec	20.5
/images/arrow_down.png	4200	152	67	417	1	2160	0.00%	7.0/sec	3.6
/problem/company/display.do	1400	507	346	1182	8	4428	0.00%	2.5/sec	8.2
/problem/company/delete.do	1400	419	280	955	8	6626	0.00%	2.5/sec	8.3
TOTAL	137200	306	127	817	1	6626	0.00%	224.0...	1911...

Performance thread results: 13,442 per minute.

Graph Results

Name: Graph Results

Comments:

Write results to file / Read from file

Filename [   ] [Browse...] Log/Display Only: ☐ Errors ☐ Successes [Configure]

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

912 ms

0 ms

No of Samples 137200   **Latest Sample** 11   **Average** 306

Deviation 389   **Throughput** 13,442.809/minute   **Median** 127

Thread Group

Name: Thread Group
Comments:

Action to be taken after a Sampler error

(•) Continue ( ) Start Next Thread Loop ( ) Stop Thread ( ) Stop Test ( ) Stop Test Now

Thread Properties

Number of Threads (users): 150
Ramp-Up Period (in seconds): 1
Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 14,076s.

Aggregate Report

Name: Aggregate Report
Comments:

Write results to file / Read from file
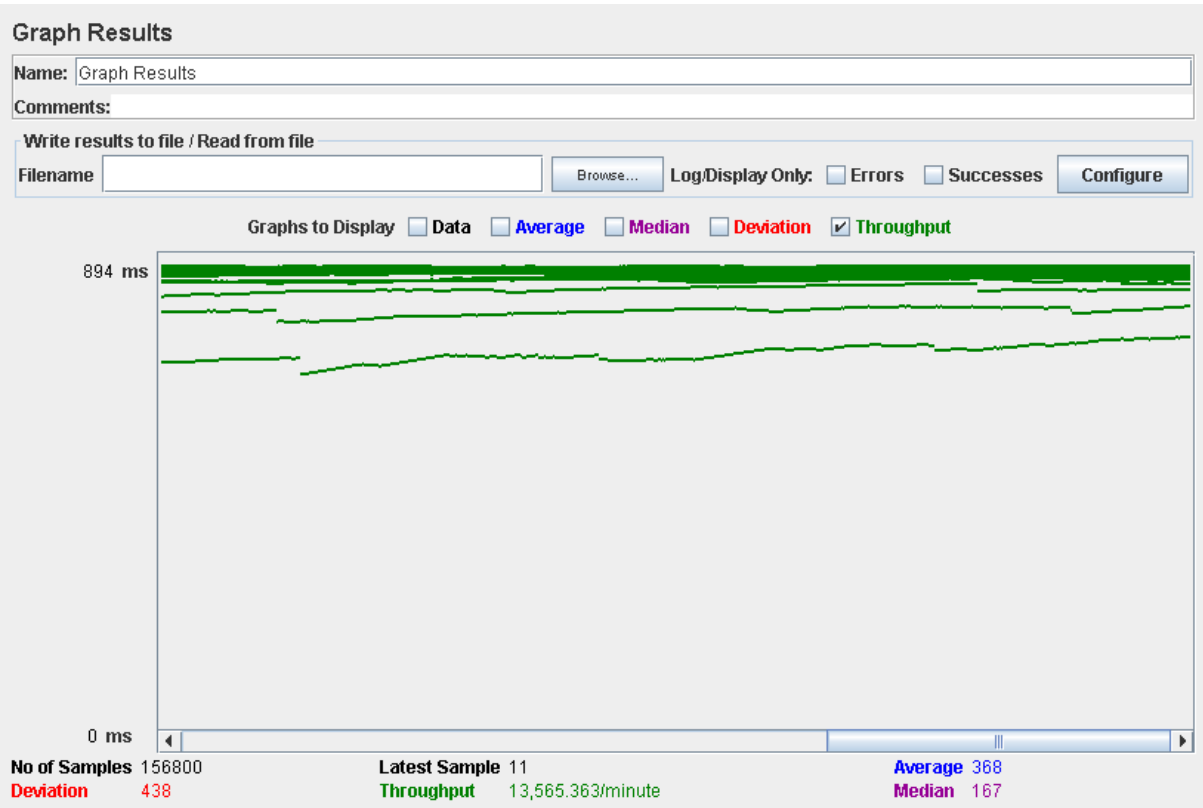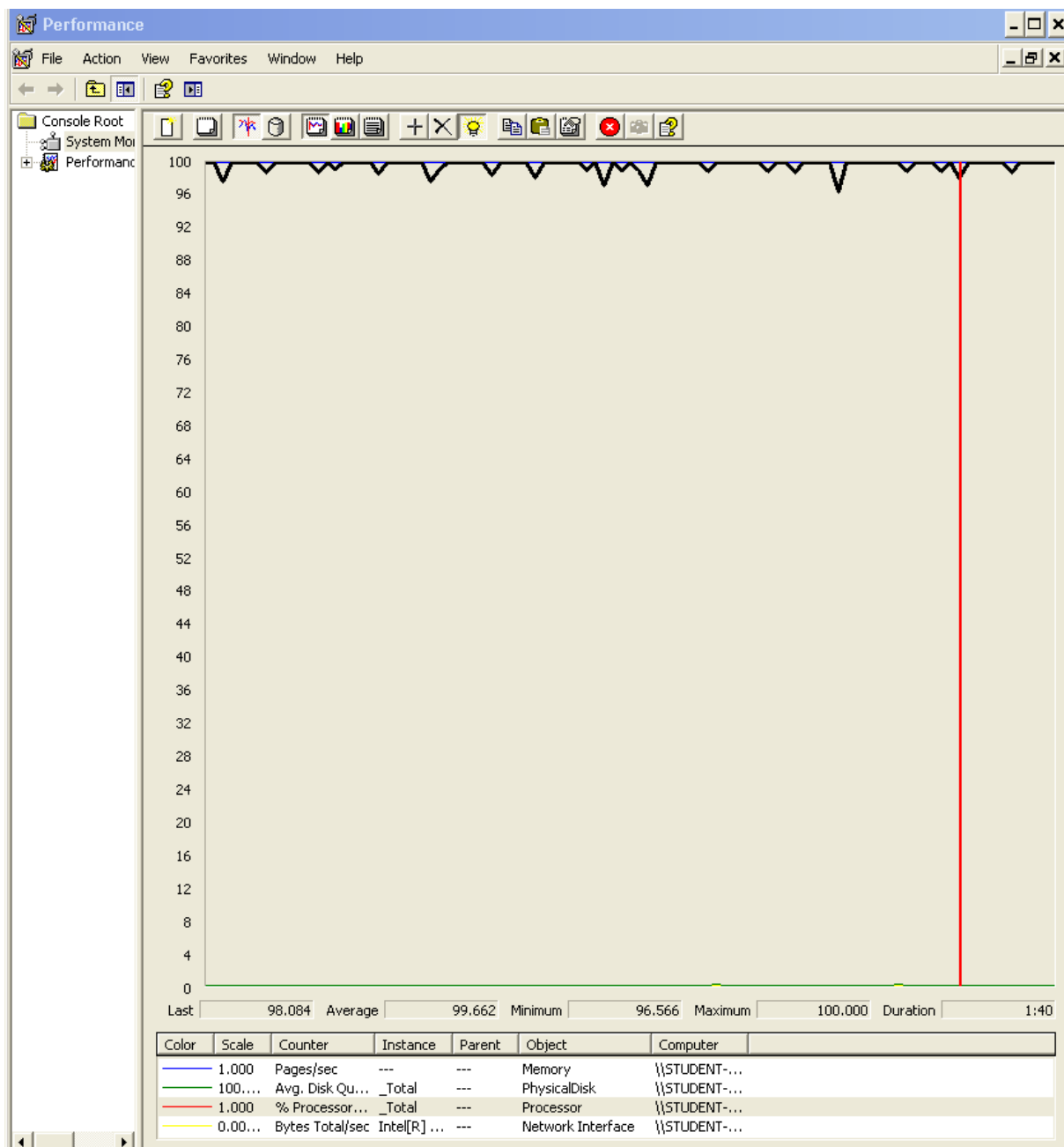Filename: [ ] Browse... Log/Display Only: ☐ Errors ☐ Successes [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/problem/company/list.do	6400	536	380	1252	8	5973	0.00%	9.2/sec	30.8
/scripts/jmenu.js	17600	233	96	676	2	3857	0.00%	25.4/...	270.0
/styles/common.css	17600	210	78	634	2	2821	0.00%	25.4/...	16.3
/scripts/jquery.js	17600	595	483	1153	8	3932	0.01%	25.4/...	6837.3
/scripts/jquery-ui.js	17600	824	741	1497	13	4494	0.00%	25.4/...	1153...
/styles/displaytag.css	17600	232	82	708	2	3644	0.00%	25.4/...	77.4
/styles/jmenu.css	17600	224	83	683	2	3250	0.00%	25.4/...	49.4
/images/logo.png	17600	217	92	631	2	3099	0.00%	25.4/...	400.5
/images/arrow_off.png	8000	197	74	598	1	2607	0.00%	11.5/...	5.8
/problem/company/create.do	1600	521	384	1250	6	3022	0.00%	2.4/sec	8.0
/problem/company/edit.do	4800	525	390	1233	8	4431	0.00%	7.1/sec	23.0
/welcome/index.do	4800	474	334	996	6	3086	0.02%	7.0/sec	20.5
/images/arrow_down.png	4800	194	74	589	2	2199	0.00%	7.0/sec	3.6
/problem/company/display.do	1600	470	339	1111	6	3064	0.00%	2.4/sec	8.0
/problem/company/delete.do	1600	451	337	1065	8	3029	0.00%	2.5/sec	8.1
TOTAL	156800	368	167	963	1	5973	0.00%	226.1...	1928...

Performance thread results: 13,565 per minute.

Graph Results

| Name: | Graph Results |
| Comments: | |

Write results to file / Read from file

Filename [   ] [Browse...] Log/Display Only: ☐ Errors ☐ Successes [Configure]

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

894 ms

0 ms

| No of Samples | 156800 | Latest Sample | 11 | Average | 368 |
| Deviation | 438 | Throughput | 13,565.363/minute | Median | 167 |

Computer performance:

Analysis results:

100 users and 10 loops: the application runs perfectly

140 users and 10 loops: the application runs perfectly too.

150 users and 10 loops: the application begins to have errors, the computer performance shows a memory bottleneck problem.

Requisite: 9.3

9.3. Manage the applications to their positions, which includes listing them grouped by status, showing them, and updating them. Updating an application amounts to making a decision on it: an application whose status is SUBMITTED may change to status ACCEPTED or REJECTED.

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

( ) Continue ( ) Start Next Thread Loop ( ) Stop Thread ( ) Stop Test ( ) Stop Test Now

Thread Properties

Number of Threads (users): 100

Ramp-Up Period (in seconds): 1

Loop Count: [ ] Forever 10

[ ] Delay Thread creation until needed

[ ] Scheduler

Performance test 90% results: Total 4,067s.

Aggregate Report

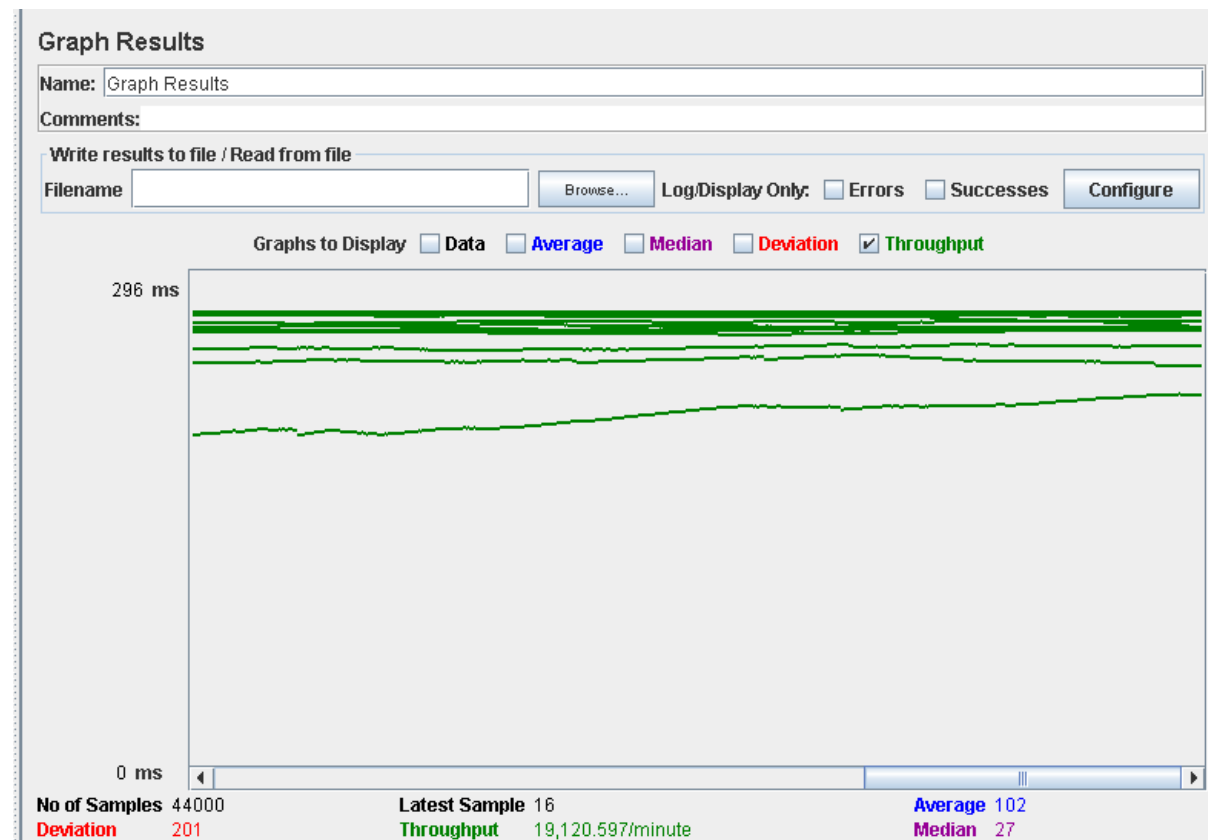**Name:** Aggregate Report

Comments:

Write results to file / Read from file

Filename [Browse...] Log/Display Only: [ ] Errors [ ] Successes [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/images/arrow_down.png	1000	23	17	43	2	221	0.00%	7.8/sec	3.9
/position/list.do	1000	538	283	1148	14	4826	0.00%	7.8/sec	33.6
/scripts/jmenu.js	5000	29	22	48	1	1079	0.00%	36.6/s...	389.5
/scripts/jquery-ui.js	5000	297	263	561	12	2207	0.00%	36.6/s...	16653.7
/styles/common.css	5000	24	17	41	2	979	0.00%	36.7/s...	23.3
/scripts/jquery.js	5000	177	150	342	8	1183	0.00%	36.7/s...	9877.4
/styles/displaytag.css	5000	24	17	41	2	1557	0.00%	36.7/s...	111.7
/styles/jmenu.css	5000	23	17	40	1	675	0.00%	36.7/s...	71.1
/images/arrow_off.png	3000	23	16	38	2	725	0.00%	22.7/s...	11.3
/images/logo.png	5000	26	20	45	2	1076	0.00%	36.7/s...	578.3
/application/company/list.do	1000	153	70	396	8	1890	0.00%	7.8/sec	25.5
/application/company/accept.do	1000	175	96	463	6	1222	0.00%	7.8/sec	25.5
/application/company/display.do	1000	157	75	419	6	1193	0.00%	7.7/sec	25.4
/	1000	369	188	905	6	3713	0.00%	7.7/sec	22.7
TOTAL	44000	102	27	300	1	4826	0.00%	318.7/...	27508.7

Performance thread results: 19,120 per minute

Graph Results

Name: Graph Results

Comments:

Write results to file / Read from file

Filename: [_____] [Browse...] Log/Display Only: ☐ Errors ☐ Successes [Configure]

Graphs to Display ☐ Data ☐ **Average** ☐ **Median** ☐ **Deviation** ☑ **Throughput**

296 ms

0 ms

| No of Samples | 44000 | Latest Sample | 16 | Average | 102 |
| Deviation | 201 | Throughput | 19,120.597/minute | Median | 27 |

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

◉ Continue ○ Start Next Thread Loop ○ Stop Thread ○ Stop Test ○ Stop Test Now

Thread Properties

Number of Threads (users): 150

Ramp-Up Period (in seconds): 1

Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

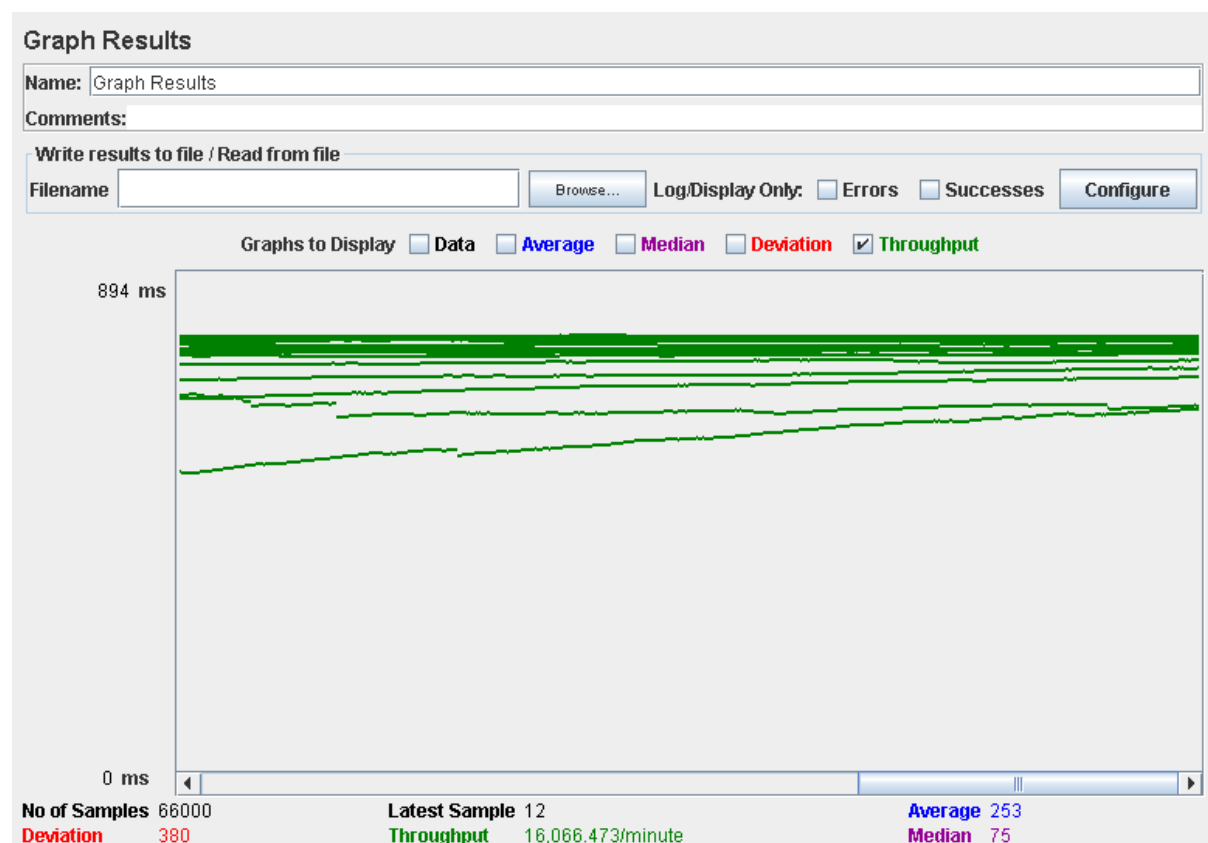Performance test 90% results: Total 8,164s.

Aggregate Report

Name: Aggregate Report
Comments:

Write results to file / Read from file
Filename: _____ Browse... Log/Display Only: ☐ Errors ☐ Successes Configure

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/images/arrow_down.png	1500	114	42	244	2	3120	0.00%	6.3/sec	3.2
/position/list.do	1500	617	379	1455	13	6764	0.00%	6.3/sec	27.3
/scripts/jmenu.js	7500	124	55	321	2	1821	0.00%	30.6/s...	325.6
/scripts/jquery-ui.js	7500	659	562	1288	14	3158	0.00%	30.6/s...	13913.8
/styles/common.css	7500	111	45	270	2	1823	0.00%	30.6/s...	19.6
/scripts/jquery.js	7500	438	351	885	9	2920	0.00%	30.6/s...	8250.2
/styles/displaytag.css	7500	123	45	373	2	1761	0.00%	30.6/s...	93.4
/styles/jmenu.css	7500	118	46	322	2	1819	0.00%	30.6/s...	59.6
/images/arrow_off.png	4500	97	42	228	1	1539	0.00%	18.6/s...	9.4
/images/logo.png	7500	108	49	279	2	1835	0.00%	30.6/s...	483.2
/application/company/list.do	1500	359	182	942	7	2039	0.00%	6.3/sec	20.8
/application/company/accept.do	1500	382	226	968	8	2235	0.00%	6.3/sec	20.9
/application/company/display.do	1500	341	192	880	6	2403	0.00%	6.4/sec	21.1
/	1500	611	327	1614	5	6894	0.00%	6.5/sec	19.0
TOTAL	66000	253	75	747	1	6894	0.00%	267.8/...	23116.1

Performance thread results: 16,066 per minute.

Graph Results

Name: Graph Results
Comments:

Write results to file / Read from file
Filename: _____ Browse... Log/Display Only: ☐ Errors ☐ Successes Configure

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

894 ms

0 ms

No of Samples 66000 Latest Sample 12 Average 253
Deviation 380 Throughput 16,066.473/minute Median 75

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

(●) Continue (○) Start Next Thread Loop (○) Stop Thread (○) Stop Test (○) Stop Test Now

Thread Properties

Number of Threads (users): 170

Ramp-Up Period (in seconds): 1

Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 13,850s.

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file
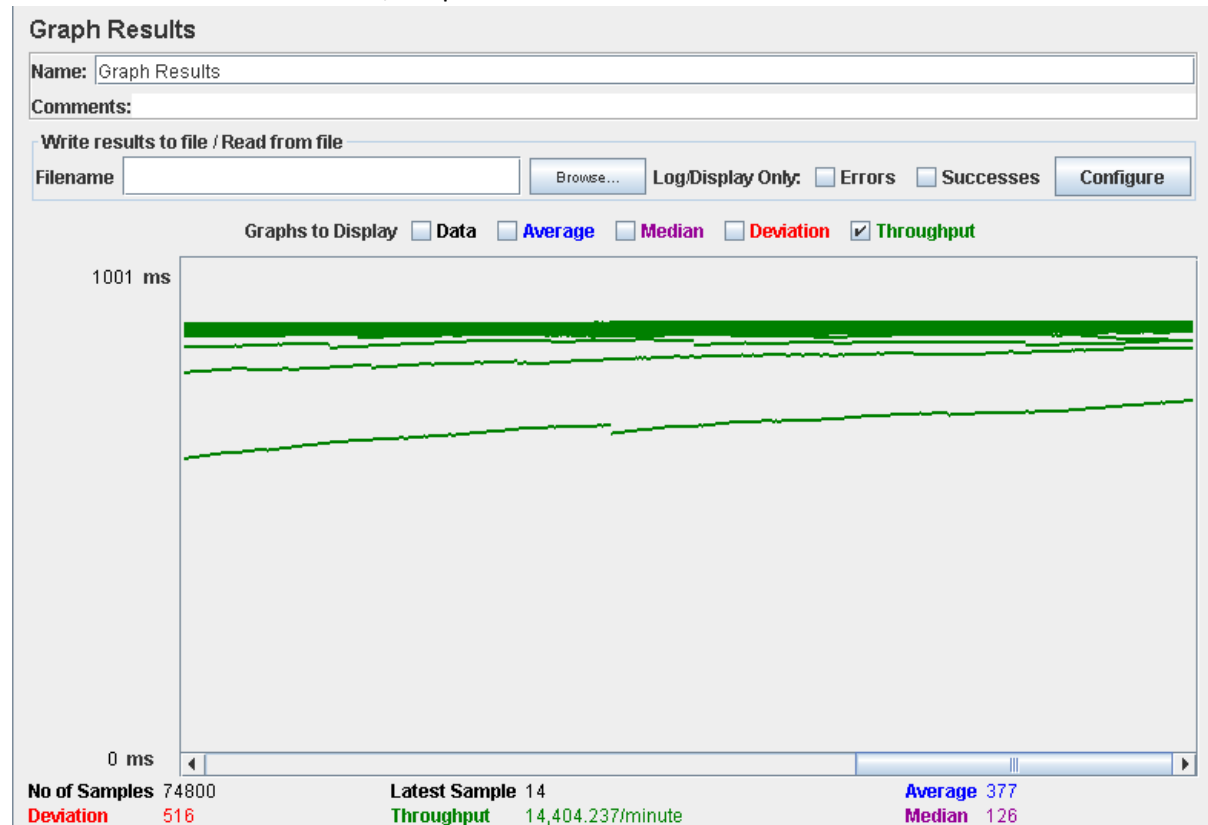
Filename [ ] Browse... Log/Display Only: ☐ Errors ☐ Successes [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/images/arrow_down.png	1700	205	67	617	1	5039	0.00%	5.6/sec	2.8
/position/list.do	1700	539	380	1244	9	3995	0.00%	5.6/sec	24.3
/scripts/jmenu.js	8500	238	87	719	2	4115	0.00%	27.4/s...	291.7
/scripts/jquery-ui.js	8500	896	775	1784	14	4925	0.00%	27.4/s...	12460.9
/styles/common.css	8500	214	71	669	2	3786	0.00%	27.4/s...	17.6
/scripts/jquery.js	8500	633	508	1361	9	3933	0.00%	27.4/s...	7389.7
/styles/displaytag.css	8500	231	75	699	1	3491	0.00%	27.4/s...	83.7
/styles/jmenu.css	8500	236	77	724	1	3926	0.00%	27.4/s...	53.4
/images/arrow_off.png	5100	206	67	633	2	3660	0.00%	16.6/s...	8.4
/images/logo.png	8500	213	80	627	2	3939	0.00%	27.4/s...	432.8
/application/company/list.do	1700	478	245	1244	8	4673	0.00%	5.6/sec	18.5
/application/company/accept.do	1700	458	240	1178	4	4443	0.00%	5.6/sec	18.5
/application/company/display.do	1700	465	227	1248	8	3856	0.00%	5.6/sec	18.6
/	1700	510	323	1192	6	4786	0.00%	5.7/sec	16.6
TOTAL	74800	377	126	1074	1	5039	0.00%	240.1/...	20724.8

Performance thread results: 14,404 per minute.

Graph Results

Name: Graph Results

Comments:

Write results to file / Read from file

Filename [   ] [Browse...] Log/Display Only: ☐ Errors ☐ Successes [**Configure**]

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

1001 ms

0 ms

No of Samples	74800	Latest Sample	14	Average	377
Deviation	516	Throughput	14,404.237/minute	Median	126

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

◉ Continue ○ Start Next Thread Loop ○ Stop Thread ○ Stop Test ○ Stop Test Now

Thread Properties

Number of Threads (users): 180

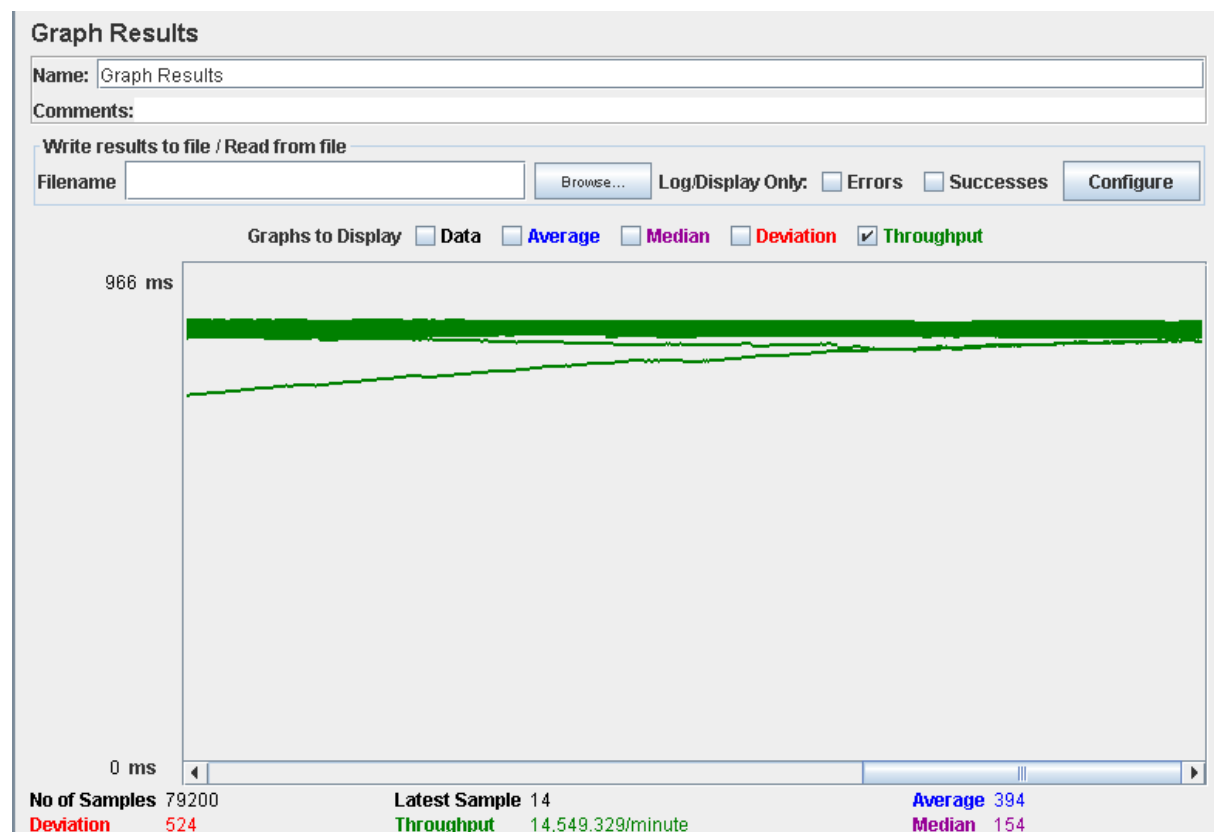**Ramp-Up Period (in seconds):** 1

Loop Count: ☐ Forever 10

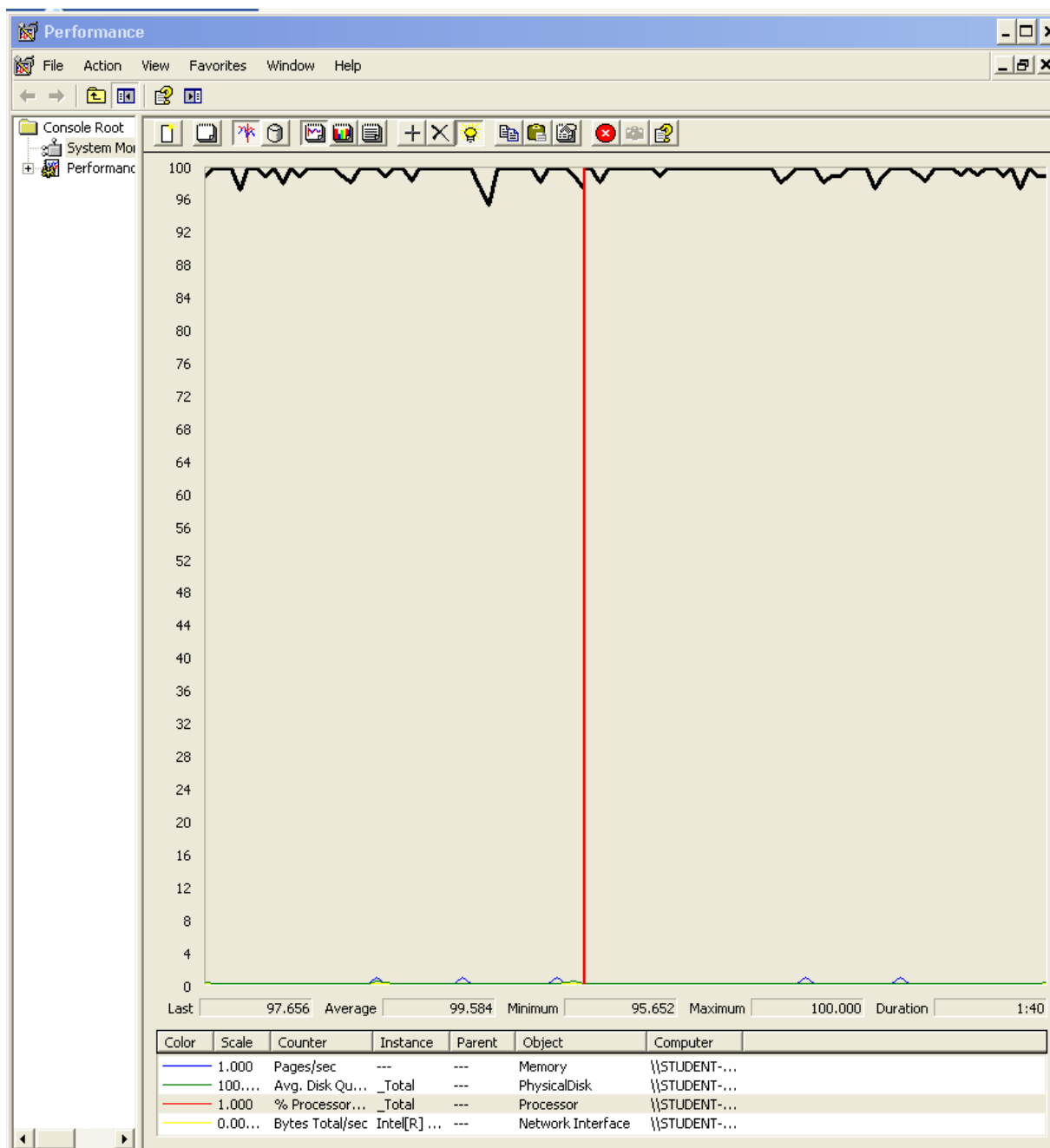☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 14,206s.

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file

Filename [   ] Browse...   Log/Display Only: ☐ Errors ☐ Successes   [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/images/arrow_down.png	1800	326	82	619	3	12375	0.00%	5.7/sec	2.9
/position/list.do	1800	504	354	1157	10	3431	0.00%	5.7/sec	24.5
/scripts/jmenu.js	9000	251	98	721	2	4165	0.00%	27.7/s...	294.8
/scripts/jquery-ui.js	9000	897	760	1776	14	4927	0.00%	27.7/s...	12595.1
/styles/common.css	9000	238	85	709	2	4144	0.00%	27.7/s...	17.8
/scripts/jquery.js	9000	647	536	1362	9	3883	0.02%	27.7/s...	7467.7
/styles/displaytag.css	9000	260	91	775	2	4164	0.02%	27.7/s...	84.6
/styles/jmenu.css	9000	243	95	700	2	2901	0.00%	27.7/s...	54.0
/images/arrow_off.png	5400	220	80	666	1	2951	0.04%	16.8/s...	8.5
/images/logo.png	9000	235	94	681	2	3544	0.02%	27.8/s...	438.0
/application/company/list.do	1800	512	294	1350	6	3658	0.00%	5.7/sec	18.7
/application/company/accept.do	1800	497	278	1284	8	3523	0.00%	5.7/sec	18.7
/application/company/display.do	1800	520	302	1293	5	5307	0.00%	5.7/sec	18.7
/	1800	456	268	1113	7	3250	0.00%	5.7/sec	16.6
TOTAL	79200	394	154	1074	1	12375	0.01%	242.5/...	20931.8

Performance thread results: 14,549 per minute.

Graph Results

Name: Graph Results

Comments:

Write results to file / Read from file

Filename [   ] Browse...   Log/Display Only: ☐ Errors ☐ Successes   [Configure]

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

966 ms

0 ms

No of Samples 79200	Latest Sample 14	Average 394
Deviation 524	Throughput 14,549.329/minute	Median 154

Computer performance:

Analysis results:

100 users and 10 loops: the application runs perfectly

150 users and 10 loops: the application runs perfectly too.

170 users and 10 loops: the application runs perfectly too.

180 users and 10 loops: the application begins to have errors, the computer performance analysis shows it could be a processors bottleneck problem.

Requisite: 10

10. An actor who is authenticated as a hacker must be able to:

1. Manage his or her applications, which includes listing them grouped by status, showing them, creating them, and updating them. When an application is created, the system assigns an arbitrary problem to it (from the set of problems that have been registered for the corresponding position). Updating an application consists in submitting a solution to the corresponding problem (a piece of text with explanations and a link to the code), registering the submission moment, and changing the status to SUBMITTED.

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

◉ Continue ◯ Start Next Thread Loop ◯ Stop Thread ◯ Stop Test ◯ Stop Test Now

Thread Properties

Number of Threads (users): 100

Ramp-Up Period (in seconds): 1

Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 3,531s.

Aggregate Report
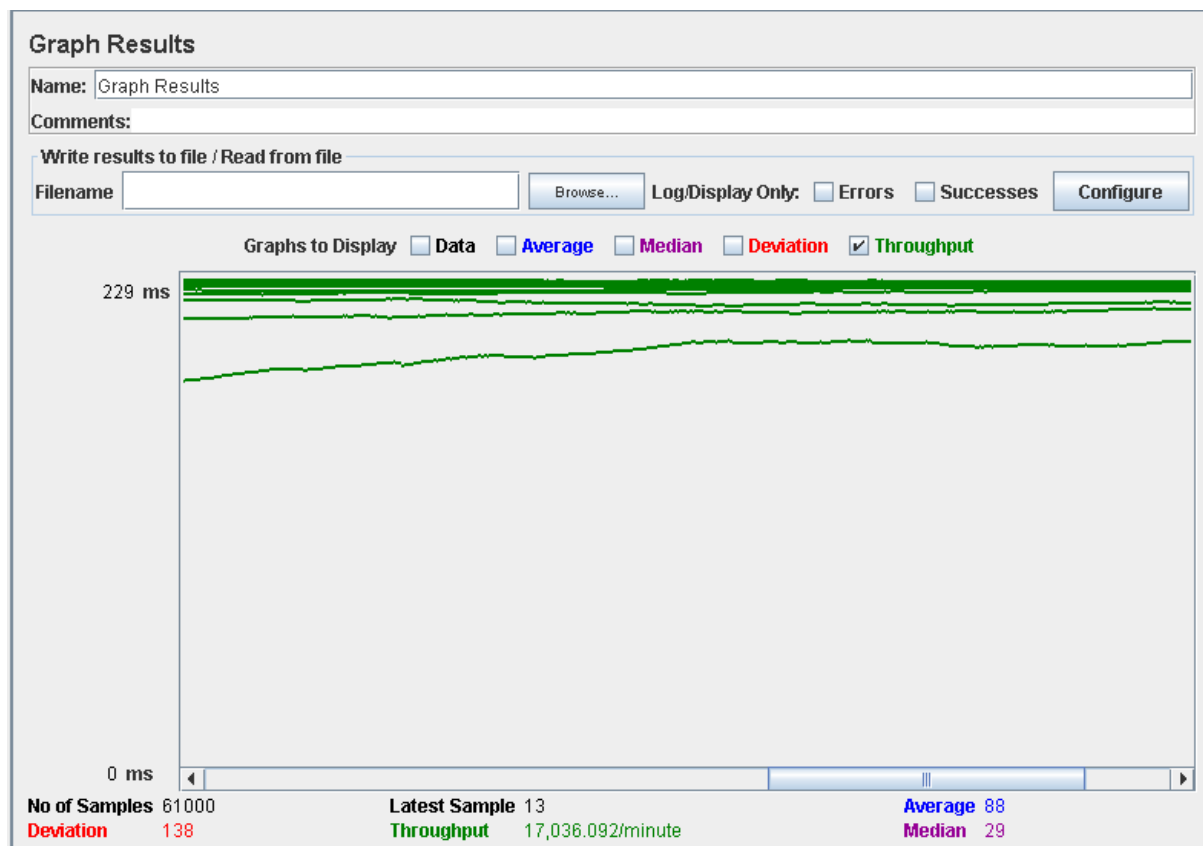
Name: Aggregate Report

Comments:

Write results to file / Read from file

Filename [   ] Browse... Log/Display Only: ☐ Errors ☐ Successes Configure

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/application/hacker/list.do	3000	218	121	537	7	2988	0.00%	14.2/s...	47.2
/scripts/jquery.js	7000	153	129	287	9	1807	0.00%	32.6/s...	8782.4
/styles/common.css	7000	24	17	44	1	753	0.00%	32.6/s...	20.7
/styles/jmenu.css	7000	23	17	42	2	877	0.00%	32.6/s...	63.3
/scripts/jmenu.js	7000	26	21	48	2	626	0.00%	32.6/s...	346.5
/scripts/jquery-ui.js	7000	232	202	446	13	1096	0.00%	32.6/s...	14814.2
/styles/displaytag.css	7000	23	17	42	1	794	0.00%	32.6/s...	99.3
/images/logo.png	7000	25	19	44	2	554	0.00%	32.6/s...	514.2
/images/arrow_off.png	3000	20	16	39	1	462	0.00%	14.2/s...	7.1
/application/hacker/create.do	1000	219	120	574	6	1362	0.00%	5.0/sec	16.4
/application/hacker/edit.do	3000	188	104	480	7	1370	0.00%	14.5/s...	47.1
/application/hacker/display.do	1000	206	115	526	4	1310	0.00%	5.0/sec	16.4
/	1000	147	83	383	6	1034	0.00%	5.0/sec	14.7
TOTAL	61000	88	29	256	1	2988	0.00%	283.9/...	24769.2

Performance thread results: 17,036 per minute.

Graph Results

Name: Graph Results
Comments:

Write results to file / Read from file

Filename: [   ] [Browse...] Log/Display Only: ☐ Errors ☐ Successes [Configure]

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

| No of Samples | 61000 | Latest Sample | 13 | Average | 88 |
| Deviation | 138 | Throughput | 17,036.092/minute | Median | 29 |

Thread Group

Name: Thread Group
Comments:

Action to be taken after a Sampler error

◉ Continue ○ Start Next Thread Loop ○ Stop Thread ○ Stop Test ○ Stop Test Now

Thread Properties

Number of Threads (users): 150
Ramp-Up Period (in seconds): 1
Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

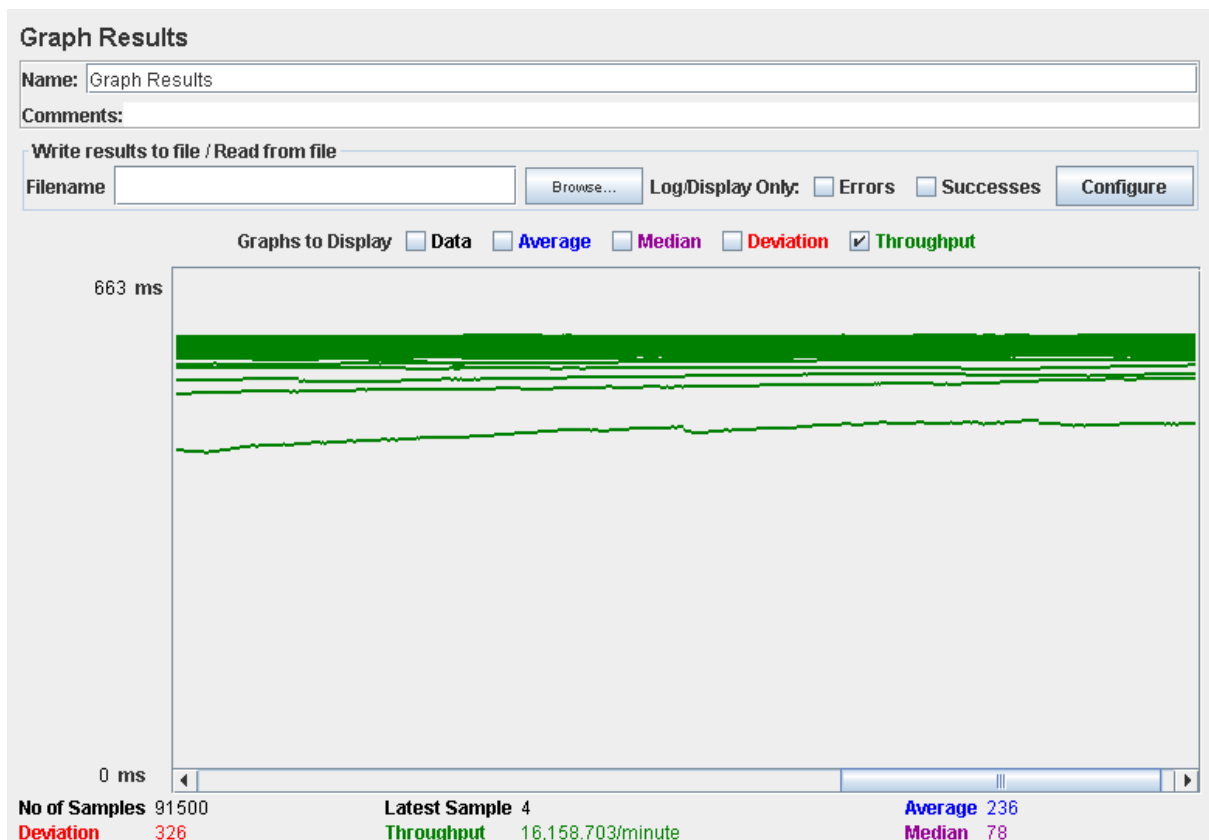Performance test 90% results: Total 5,745s.

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file

Filename [   ] [Browse...]   Log/Display Only: ☐ Errors ☐ Successes   [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/application/hacker/list.do	4500	469	335	1057	7	5715	0.00%	13.4/s...	44.7
/scripts/jquery.js	10500	386	324	774	10	4006	0.00%	30.9/s...	8327.8
/styles/common.css	10500	103	43	256	2	2084	0.00%	30.9/s...	19.8
/styles/jmenu.css	10500	103	43	262	1	1663	0.00%	30.9/s...	60.1
/scripts/jmenu.js	10500	108	50	272	2	3194	0.00%	30.9/s...	328.7
/scripts/jquery-ui.js	10500	570	503	1081	15	3424	0.00%	30.9/s...	14047.9
/styles/displaytag.css	10500	107	42	286	1	1814	0.00%	30.9/s...	94.3
/images/logo.png	10500	101	47	243	2	2509	0.00%	30.9/s...	487.7
/images/arrow_off.png	4500	94	39	231	2	1974	0.00%	13.4/s...	6.7
/application/hacker/create.do	1500	432	317	994	8	2379	0.00%	4.6/sec	15.2
/application/hacker/edit.do	4500	427	315	964	3	3065	0.00%	13.6/s...	44.3
/application/hacker/display.do	1500	426	304	971	5	2802	0.00%	4.7/sec	15.4
/	1500	217	142	529	7	1691	0.00%	4.7/sec	13.8
TOTAL	91500	236	78	681	1	5715	0.00%	269.3/...	23495.1

Performance thread results: 16,158 per minute.

Graph Results

Name: Graph Results

Comments:

Write results to file / Read from file

Filename [   ] [Browse...]   Log/Display Only: ☐ Errors ☐ Successes   [Configure]

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

No of Samples	91500	Latest Sample	4	Average	236
Deviation	326	Throughput	16,158.703/minute	Median	78

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

⦿ Continue ○ Start Next Thread Loop ○ Stop Thread ○ Stop Test ○ Stop Test Now

Thread Properties

Number of Threads (users): 180

Ramp-Up Period (in seconds): 1

Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 10,085s.
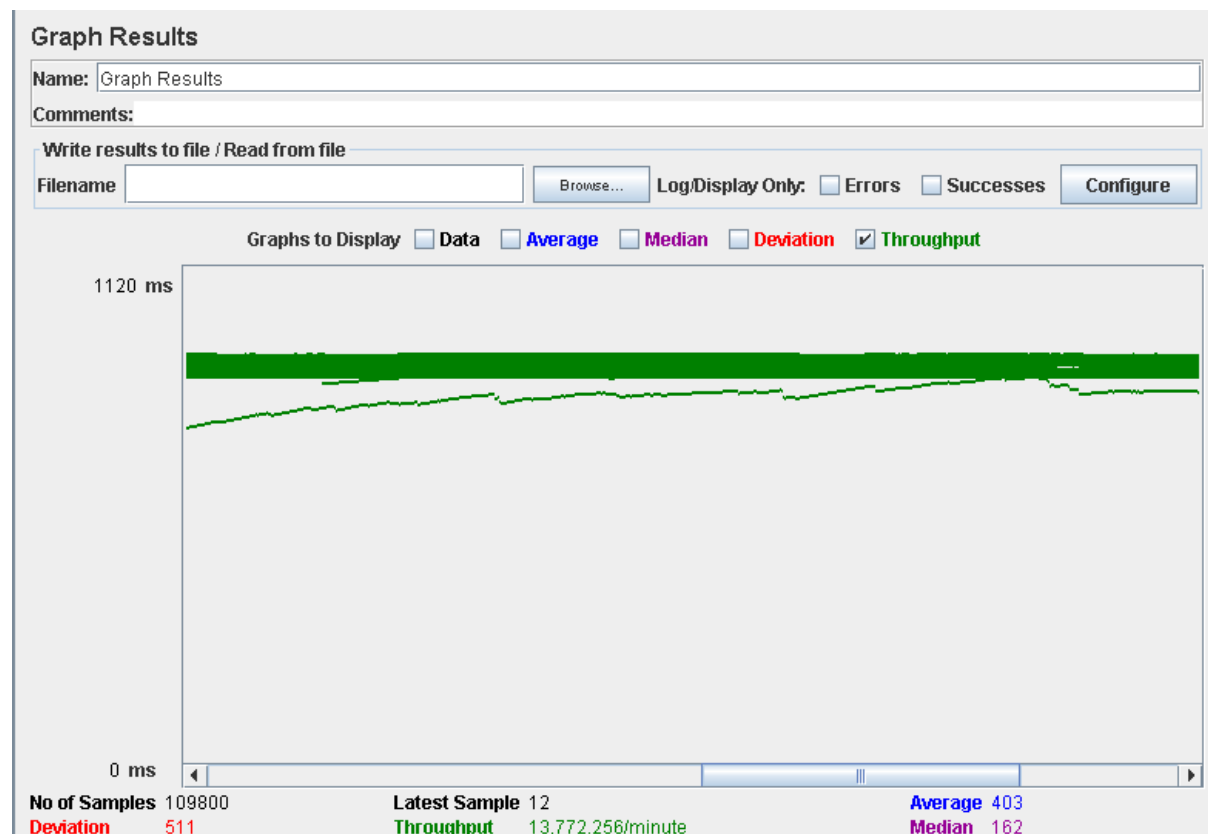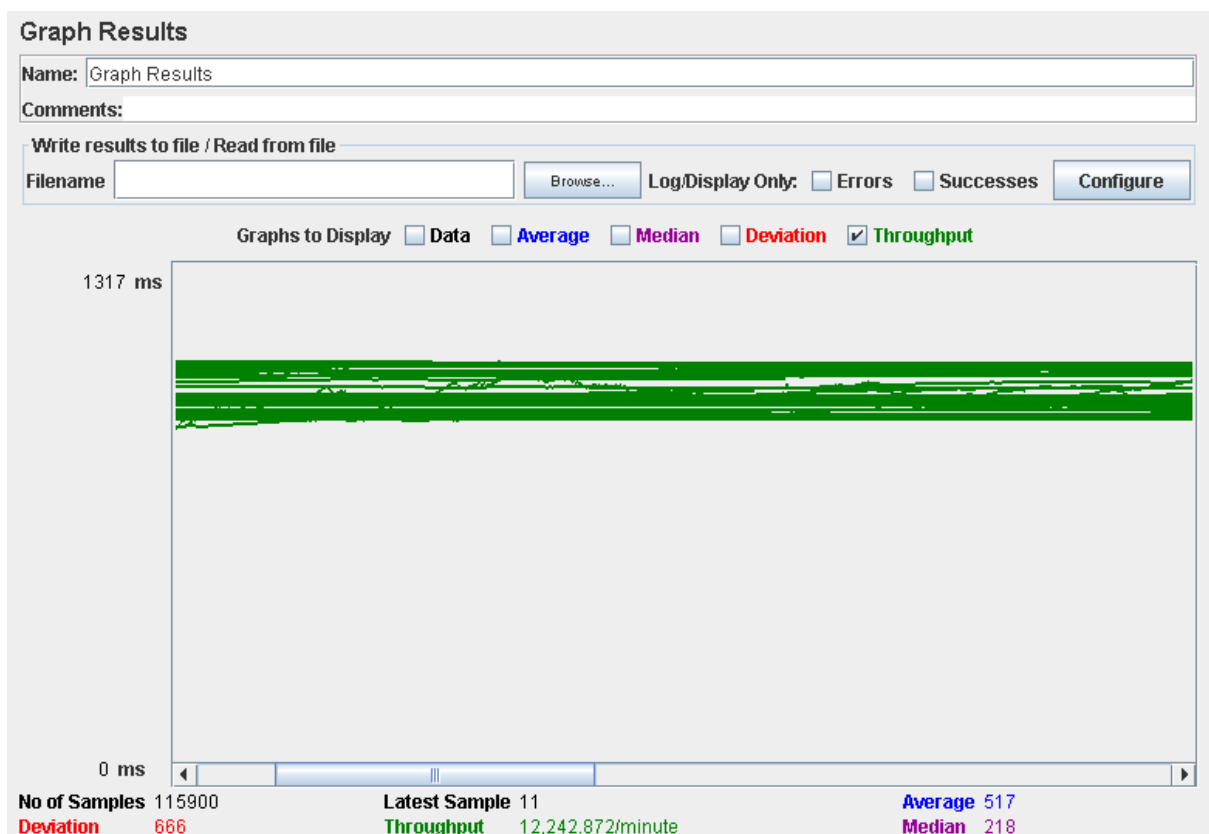
Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file

Filename [ ] Browse... Log/Display Only: ☐ Errors ☐ Successes Configure

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/application/hacker/list.do	5400	684	525	1540	7	6248	0.00%	11.4/s...	38.0
/scripts/jquery.js	12600	630	524	1296	8	3949	0.00%	26.3/s...	7097.5
/styles/common.css	12600	223	89	669	2	3165	0.00%	26.4/s...	16.9
/styles/jmenu.css	12600	240	89	720	2	3308	0.00%	26.3/s...	51.3
/scripts/jmenu.js	12600	234	99	671	2	3228	0.00%	26.3/s...	280.2
/scripts/jquery-ui.js	12600	878	752	1773	14	5047	0.00%	26.3/s...	11972.9
/styles/displaytag.css	12600	220	86	647	2	3200	0.00%	26.4/s...	80.4
/images/logo.png	12600	230	95	680	2	3257	0.00%	26.3/s...	415.7
/images/arrow_off.png	5400	201	79	591	2	2992	0.00%	11.4/s...	5.7
/application/hacker/create.do	1800	592	422	1391	7	3872	0.00%	3.9/sec	12.8
/application/hacker/edit.do	5400	625	463	1459	6	4797	0.00%	11.5/s...	37.4
/application/hacker/display.do	1800	567	413	1268	3	4251	0.00%	4.0/sec	13.1
/	1800	327	193	865	6	2380	0.00%	4.0/sec	11.7
TOTAL	109800	403	162	1092	2	6248	0.00%	229.5/...	20025.5

Performance thread results: 13,772 per minute.

Graph Results

Name: Graph Results
Comments:

Write results to file / Read from file
Filename [   ] Browse...   Log/Display Only: ☐ Errors ☐ Successes   Configure

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

1120 ms

0 ms

No of Samples 109800   Latest Sample 12   Average 403
Deviation   511   Throughput   13,772.256/minute   Median 162

Thread Group

Name: Thread Group
Comments:

Action to be taken after a Sampler error
● Continue ○ Start Next Thread Loop ○ Stop Thread ○ Stop Test ○ Stop Test Now

Thread Properties
Number of Threads (users): 190
Ramp-Up Period (in seconds): 1
Loop Count: ☐ Forever 10
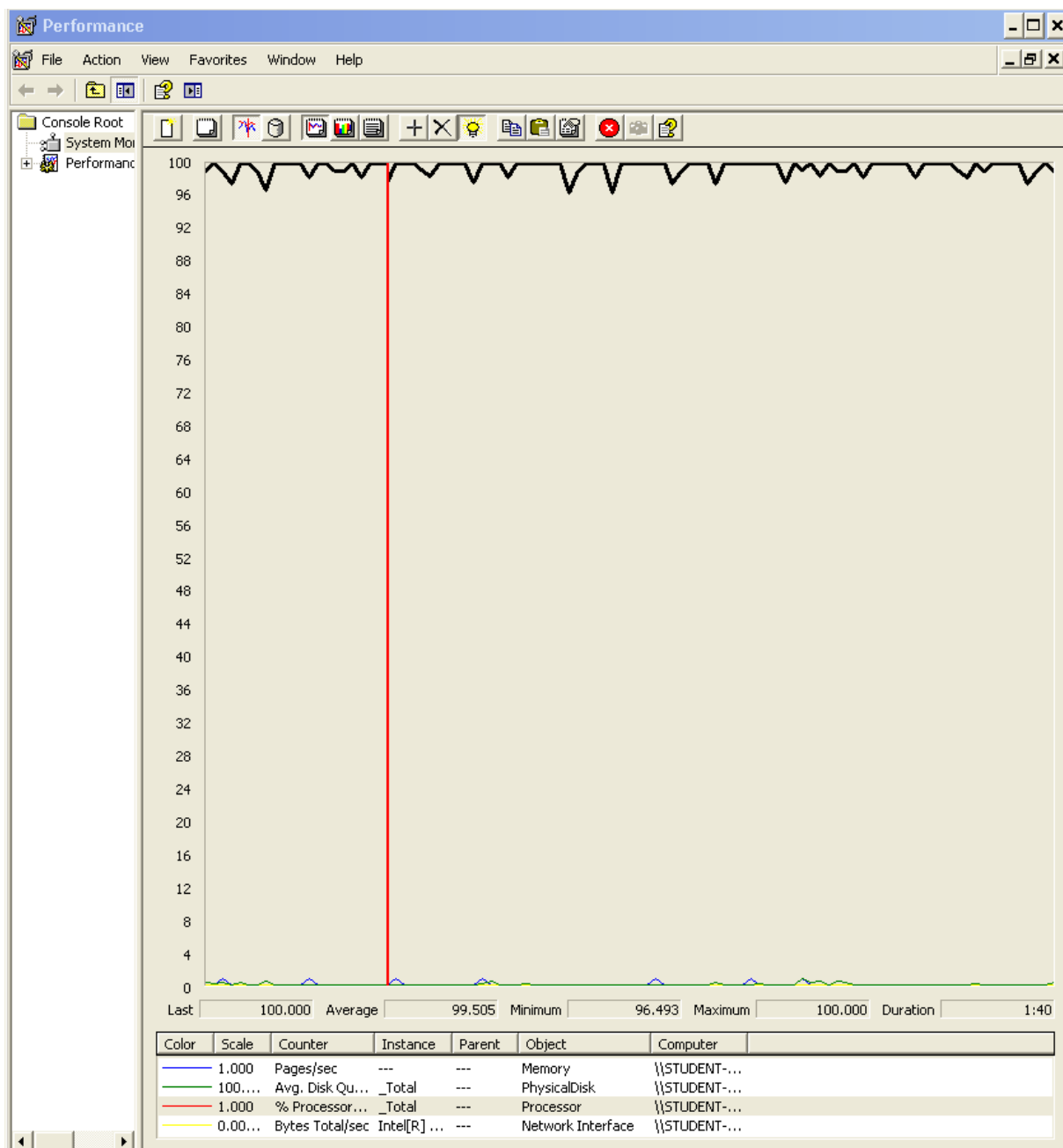☐ Delay Thread creation until needed
☐ Scheduler

Performance test 90% results: Total 16,452s.

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file

Filename [   ] Browse...   Log/Display Only: ☐ Errors ☐ Successes   [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/application/hacker/list.do	5700	854	640	1954	1	8141	0.33%	10.1/s...	33.7
/scripts/jquery.js	13300	778	621	1646	1	6756	0.11%	23.4/s...	6301.9
/styles/common.css	13300	315	109	886	1	4787	0.14%	23.4/s...	15.0
/styles/jmenu.css	13300	320	107	912	2	6115	0.16%	23.4/s...	45.6
/scripts/jmenu.js	13300	343	126	940	2	5016	0.15%	23.4/s...	248.8
/scripts/jquery-ui.js	13300	1033	847	2127	13	6380	0.08%	23.4/s...	10633.5
/styles/displaytag.css	13300	306	103	900	2	5362	0.21%	23.4/s...	71.4
/images/logo.png	13300	328	118	915	2	5181	0.21%	23.4/s...	368.8
/images/arrow_off.png	5700	290	94	840	1	5019	0.16%	10.1/s...	5.1
/application/hacker/create.do	1900	767	514	1875	2	6158	0.21%	3.4/sec	11.3
/application/hacker/edit.do	5700	724	490	1727	1	7837	0.19%	10.2/s...	33.1
/application/hacker/display.do	1900	777	546	1836	6	6529	0.21%	3.5/sec	11.5
/	1900	425	230	1070	1	4282	0.11%	3.5/sec	10.3
TOTAL	115900	517	218	1388	1	8141	0.16%	204.0/...	17784.7

Performance thread results: 12,242 per minute.

Graph Results

Name: Graph Results

Comments:

Write results to file / Read from file

Filename [   ] Browse...   Log/Display Only: ☐ Errors ☐ Successes   [Configure]

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

1317 ms

0 ms

No of Samples	115900	Latest Sample	11	Average	517
Deviation	666	Throughput	12,242.872/minute	Median	218

Computer performance:

Analysis results:

100 users and 10 loops: the application runs perfectly.

150 users and 10 loops: the application runs perfectly.

180 users and 10 loops: the application runs perfectly.

190 users and 10 loops: the application begins to have errors, the computer performance analysis shows it could be a processors bottleneck problem.

11. An actor who is authenticated as an administrator must be able to:

    1. Create user accounts for new administrators.

    2. Display a dashboard with the following information:

- The average, the minimum, the maximum, and the standard deviation of the number of positions per company.
- The average, the minimum, the maximum, and the standard deviation of the number of applications per hacker.
- The companies that have offered more positions.
- The hackers who have made more applications.
- The average, the minimum, the maximum, and the standard deviation of the salaries offered.
- The best and the worst position in terms of salary.

18. An actor who is authenticated as an administrator must be able to:

    1. Display a dashboard with the following information:

- The minimum, the maximum, the average, and the standard deviation of the number of curricula per hacker.
- The minimum, the maximum, the average, and the standard deviation of the number of results in the finders.
- The ratio of empty versus non-empty finders.

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

    ◉ Continue   ○ Start Next Thread Loop   ○ Stop Thread   ○ Stop Test   ○ Stop Test Now

Thread Properties

Number of Threads (users): 100

Ramp-Up Period (in seconds): 1

Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 11,393s.

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file

Filename [   ] [Browse...]   Log/Display Only: ☐ Errors ☐ Successes   [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/	1000	1243	556	3418	13	10153	0.00%	9.7/sec	29.1
/scripts/jquery-ui.js	4000	564	427	1219	16	5831	0.00%	38.4/...	1747...
/styles/jmenu.css	4000	68	36	93	3	1776	0.00%	38.4/...	74.6
/scripts/jquery.js	4000	360	248	803	10	3658	0.00%	38.4/...	1035...
/scripts/jmenu.js	4000	67	42	97	2	1717	0.00%	38.5/...	409.2
/styles/displaytag.css	4000	60	35	81	2	1703	0.00%	38.5/...	117.2
/styles/common.css	4000	63	35	80	2	2269	0.00%	38.5/...	24.4
/images/logo.png	4000	75	40	101	3	2257	0.00%	38.5/...	606.8
/images/arrow_down.png	2000	64	34	83	6	2063	0.00%	19.3/...	9.7
/administrator/create.do	2000	364	232	836	25	3802	0.00%	19.3/...	62.8
/welcome/index.do	1000	1460	880	3777	10	10047	0.00%	9.7/sec	28.4
/administrator/dashboard.do	1000	344	227	765	23	2572	0.00%	9.8/sec	32.1
TOTAL	35000	255	56	672	2	10153	0.00%	335.9...	2917...

Performance thread results: 20,152 per minute.

Graph Results

Name: Graph Results

Comments:

Write results to file / Read from file

Filename [   ] [Browse...]   Log/Display Only: ☐ Errors ☐ Successes   [Configure]

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

776 ms

0 ms

No of Samples	35000	Latest Sample	16	Average	255
Deviation	568	Throughput	20,152.004/minute	Median	56

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

○ Continue   ○ Start Next Thread Loop   ○ Stop Thread   ○ Stop Test   ○ Stop Test Now

Thread Properties

Number of Threads (users): 150

Ramp-Up Period (in seconds): 1

Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 7,902s.

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file

Filename: _____ Browse...   Log/Display Only: ☐ Errors ☐ Successes   Configure

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/	1500	489	395	839	11	3652	0.00%	8.9/sec	26.7
/scripts/jquery-ui.js	6000	756	677	1497	12	3702	0.00%	35.1/...	1593...
/styles/jmenu.css	6000	180	75	555	1	1912	0.00%	35.1/...	68.2
/scripts/jquery.js	6000	541	457	1077	10	2855	0.00%	35.1/...	9445.7
/scripts/jmenu.js	6000	159	80	441	2	2781	0.00%	35.1/...	373.2
/styles/displaytag.css	6000	159	67	479	1	1912	0.00%	35.1/...	107.0
/styles/common.css	6000	157	67	464	2	2388	0.00%	35.1/...	22.4
/images/logo.png	6000	158	75	453	2	2418	0.00%	35.1/...	553.5
/images/arrow_down.png	3000	141	62	388	1	1959	0.00%	17.6/...	8.9
/administrator/create.do	3000	442	380	862	7	2842	0.00%	17.6/...	57.4
/welcome/index.do	1500	499	446	862	7	2728	0.00%	8.8/sec	25.9
/administrator/dashboard.do	1500	428	389	764	6	2091	0.00%	8.8/sec	29.1
TOTAL	52500	315	130	811	1	3702	0.00%	306.7...	2663...

Performance thread results: 18,283 per minute.

Graph Results

Name: Graph Results

Comments:

Write results to file / Read from file

Filename: [   ] [Browse...] Log/Display Only: ☐ Errors ☐ Successes [Configure]

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

887 ms

0 ms

| No of Samples 59500 | Latest Sample 11 | Average 342 |
| Deviation 384 | Throughput 18,283.127/minute | Median 176 |

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error
   ● Continue   ○ Start Next Thread Loop   ○ Stop Thread   ○ Stop Test   ○ Stop Test Now

Thread Properties

Number of Threads (users): 160

Ramp-Up Period (in seconds): 1

Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 13,993s.

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file

Filename: [   ] [Browse...] Log/Display Only: ☐ Errors ☐ Successes [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/	1600	811	495	1844	7	12481	0.00%	8.7/sec	26.2
/scripts/jquery-ui.js	6400	859	644	1907	20	5816	0.00%	34.5/...	1568...
/styles/jmenu.css	6400	322	61	1070	1	5273	0.00%	34.5/...	67.1
/scripts/jquery.js	6400	645	421	1505	12	6609	0.00%	34.5/...	9296.8
/scripts/jmenu.js	6400	215	57	696	2	4475	0.00%	34.5/...	367.3
/styles/displaytag.css	6400	233	53	777	2	4731	0.00%	34.5/...	105.3
/styles/common.css	6400	223	50	726	2	5277	0.00%	34.5/...	22.0
/images/logo.png	6400	215	57	654	2	4600	0.00%	34.5/...	544.5
/images/arrow_down.png	3200	186	46	596	2	4690	0.00%	17.3/...	8.7
/administrator/create.do	3200	623	426	1443	9	5657	0.00%	17.3/...	56.4
/welcome/index.do	1600	632	495	1440	8	6384	0.00%	8.7/sec	25.4
/administrator/dashboard.do	1600	604	445	1335	8	6441	0.00%	8.7/sec	28.5
TOTAL	56000	415	115	1217	1	12481	0.00%	301.6...	2619...

Performance thread results: 18,907 per minute.

Graph Results

Name: Graph Results

Comments:

Write results to file / Read from file

Filename: [   ] [Browse...] Log/Display Only: ☐ Errors ☐ Successes [Configure]

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

1280 ms

0 ms

No of Samples	56000	Latest Sample	9	Average	415
Deviation	626	Throughput	18,097.793/minute	Median	115

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

(•) Continue ( ) Start Next Thread Loop ( ) Stop Thread ( ) Stop Test ( ) Stop Test Now

Thread Properties

Number of Threads (users): 170

Ramp-Up Period (in seconds): 1

Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 10,104s.

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file

Filename _____ [Browse...] Log/Display Only: ☐ Errors ☐ Successes [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/	1700	535	430	1101	1	6766	0.94%	8.8/sec	26.5
/scripts/jquery-ui.js	6800	684	621	1276	0	3495	0.56%	34.8/...	1574...
/styles/jmenu.css	6800	228	79	654	1	2273	0.76%	34.8/...	67.7
/scripts/jquery.js	6800	508	430	990	1	2640	0.69%	34.8/...	9321.4
/scripts/jmenu.js	6800	202	85	589	1	2218	0.53%	34.9/...	369.2
/styles/displaytag.css	6800	210	76	608	0	1996	0.40%	34.9/...	106.1
/styles/common.css	6800	197	72	579	1	2790	0.51%	34.9/...	22.4
/images/logo.png	6800	213	84	606	1	2793	0.63%	34.8/...	546.6
/images/arrow_down.png	3400	188	70	555	1	2010	0.50%	17.4/...	8.9
/administrator/create.do	3400	523	456	1030	7	2939	0.74%	17.5/...	56.9
/welcome/index.do	1700	534	493	956	14	2742	0.00%	8.8/sec	25.9
/administrator/dashboard.do	1700	500	436	932	2	3539	0.65%	8.8/sec	29.0
TOTAL	59500	342	176	836	0	6766	0.58%	304.7...	2631...

Performance thread results: 18,400 per minute.
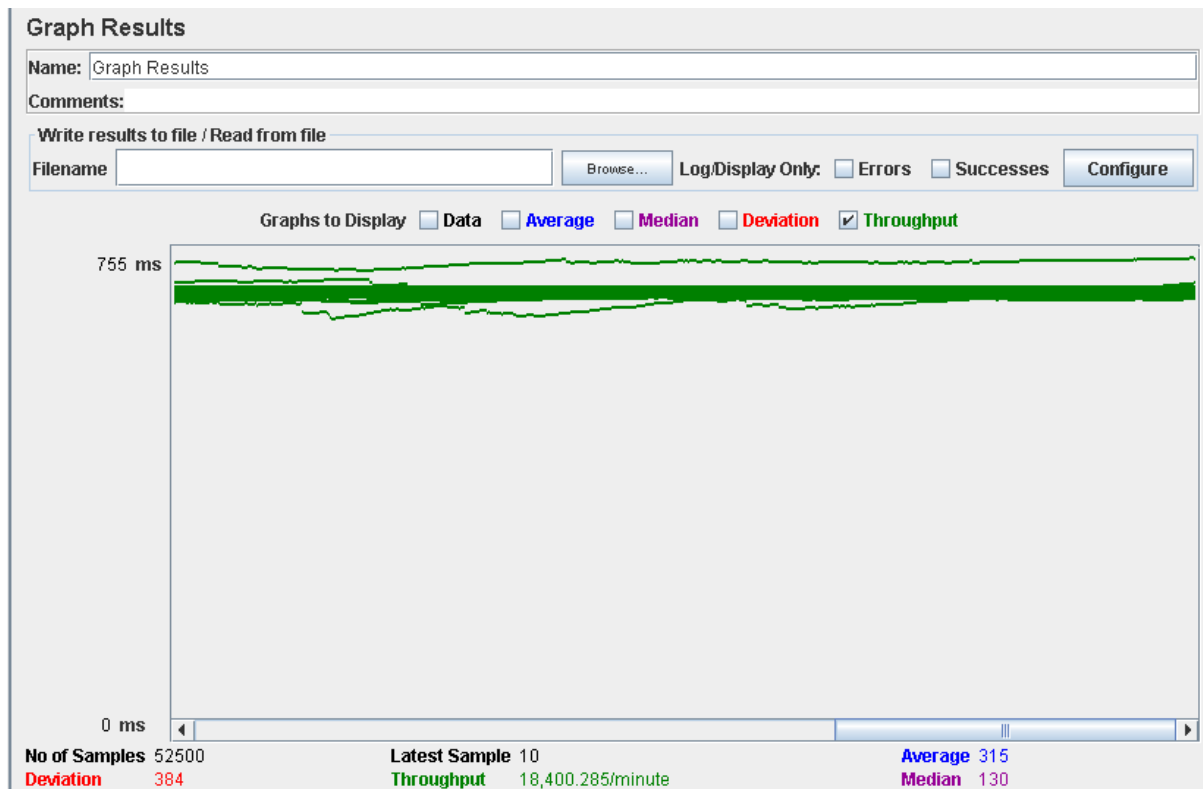
Computer performance:
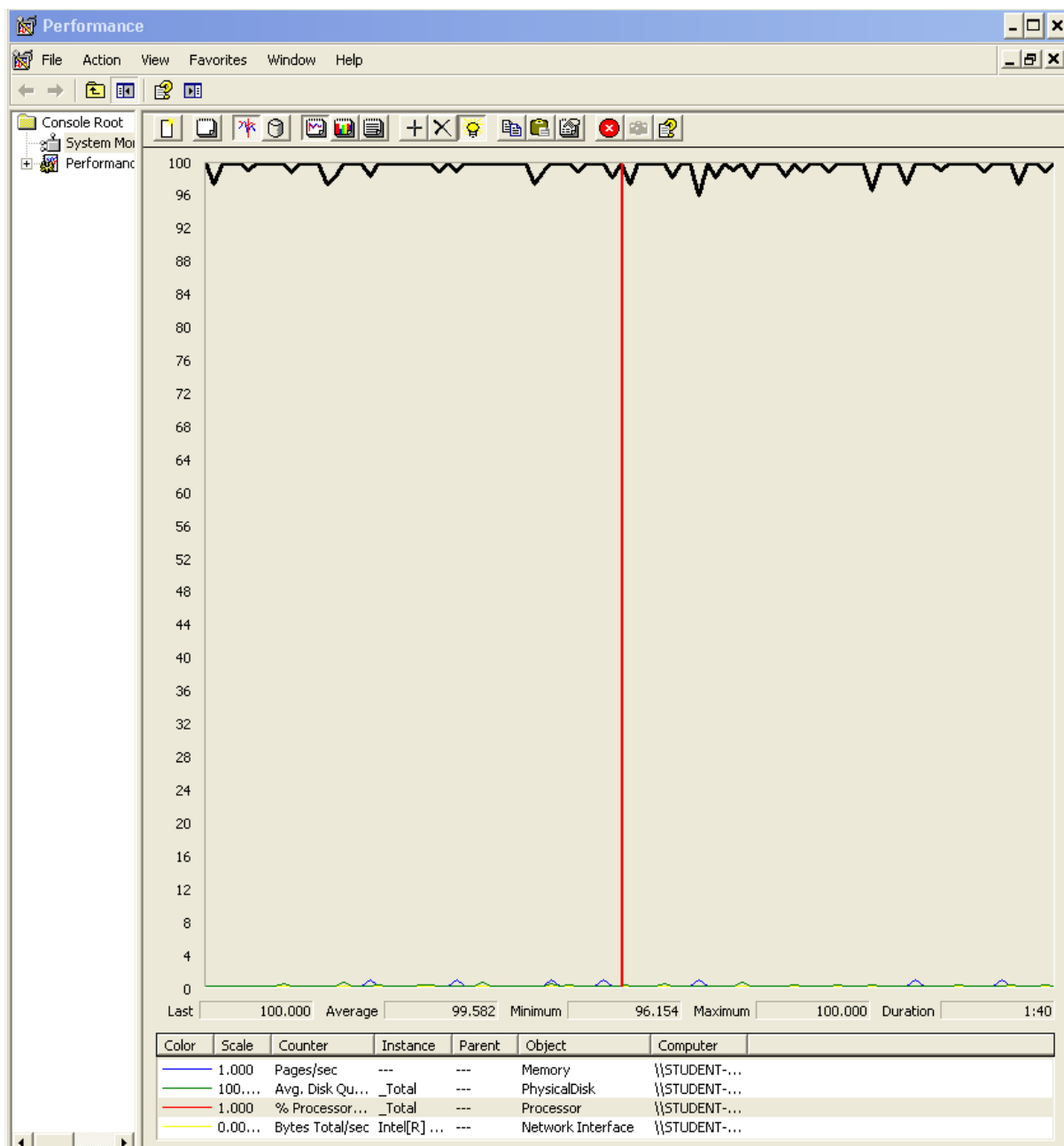
Analysis results:

100 users and 10 loops: the application runs well, the times are a bit high sometimes butt is fixed somehow with 150 users, could be that the computer was doing another tasks under the system.

150 users and 10 loops: the application runs perfectly.

160 users and 10 loops: the application runs perfectly.

170 users and 10 loops: the application begins to have errors, the computer performance analysis shows it could be a processors bottleneck problem.

Requisite: 17.1

17. An actor who is authenticated as a hacker must be able to:

1. Manage his or her curricula, which includes listing, showing, creating, updating, and deleting them. When a hacker makes an application, he or she must select one of his or her curricula so that it's attached to the application. Note that attaching a curriculum makes a copy; the updates that a hacker performs on the original curriculum are not propagated to the applications to which he or she's attached a previous version.

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

⦿ Continue ○ Start Next Thread Loop ○ Stop Thread ○ Stop Test ○ Stop Test Now

Thread Properties

Number of Threads (users): 100

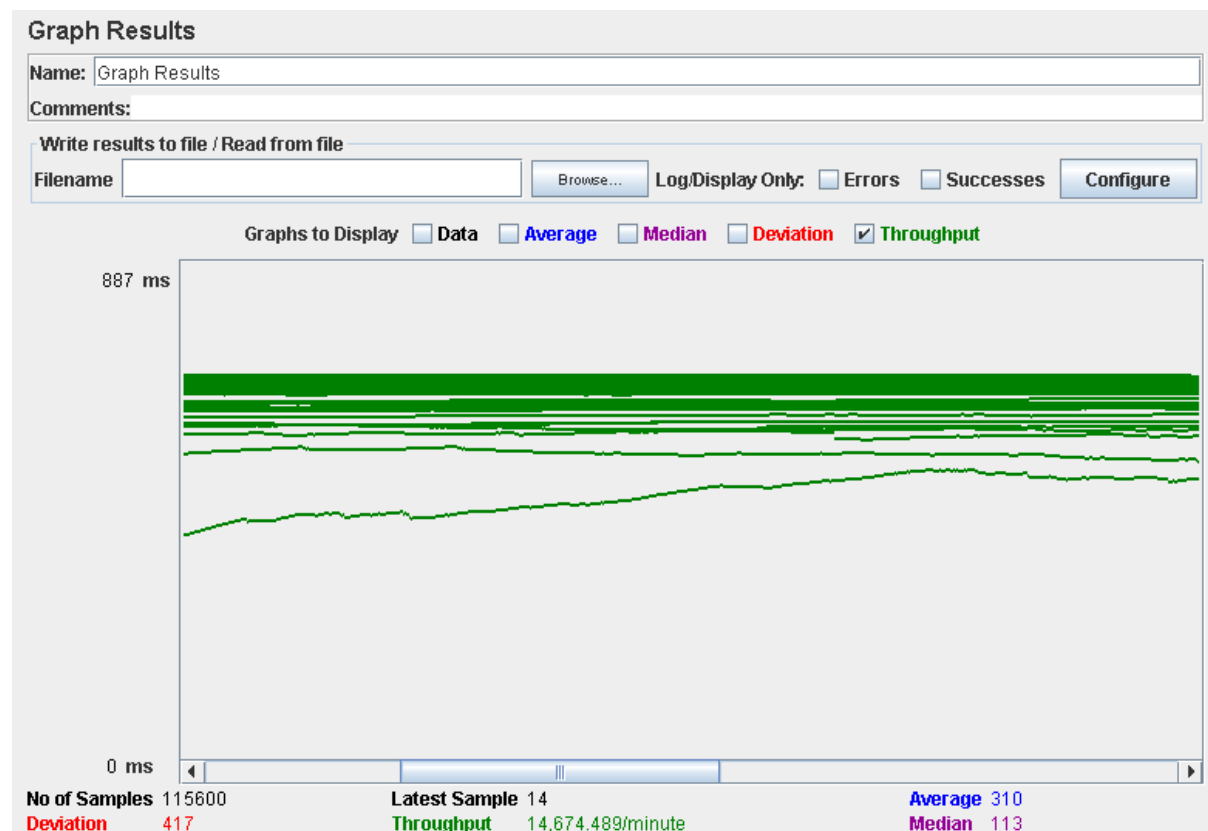**Ramp-Up Period (in seconds):** 1

Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 4,302s.

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file

Filename [   ] Browse... Log/Display Only: ☐ Errors ☐ Successes Configure

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/curriculum/hacker/list.do	3514	194	95	442	3	3380	0.00%	15.5/s...	51.3
/scripts/jquery-ui.js	7078	222	187	443	13	1500	0.00%	31.1/s...	14146.7
/scripts/jquery.js	7078	137	112	279	7	910	0.00%	31.1/s...	8387.2
/styles/common.css	7071	21	17	40	1	523	0.00%	31.1/s...	19.8
/styles/jmenu.css	7071	20	17	38	1	411	0.00%	31.1/s...	60.4
/scripts/jmenu.js	7073	23	19	40	2	324	0.00%	31.1/s...	330.8
/styles/displaytag.css	7078	20	16	38	2	515	0.00%	31.1/s...	94.8
/images/logo.png	7068	23	19	40	2	350	0.00%	31.1/s...	490.6
/curriculum/hacker/create.do	902	180	85	438	9	2223	0.00%	4.0/sec	13.1
/curriculum/hacker/display.do	1781	210	114	509	9	2022	0.00%	8.0/sec	26.3
/personalData/hacker/create.do	897	224	116	576	8	2041	0.00%	4.1/sec	13.5
/personalData/hacker/edit.do	897	200	112	530	8	1884	0.00%	4.1/sec	13.3
/personalData/hacker/display.do	896	198	115	466	4	2073	0.00%	4.1/sec	13.6
/curriculum/hacker/delete.do	851	161	87	423	8	1014	0.00%	4.0/sec	13.3
TOTAL	60149	103	30	252	1	3380	0.00%	264.5/...	23669.8

Performance thread results: 15,324 per minute.
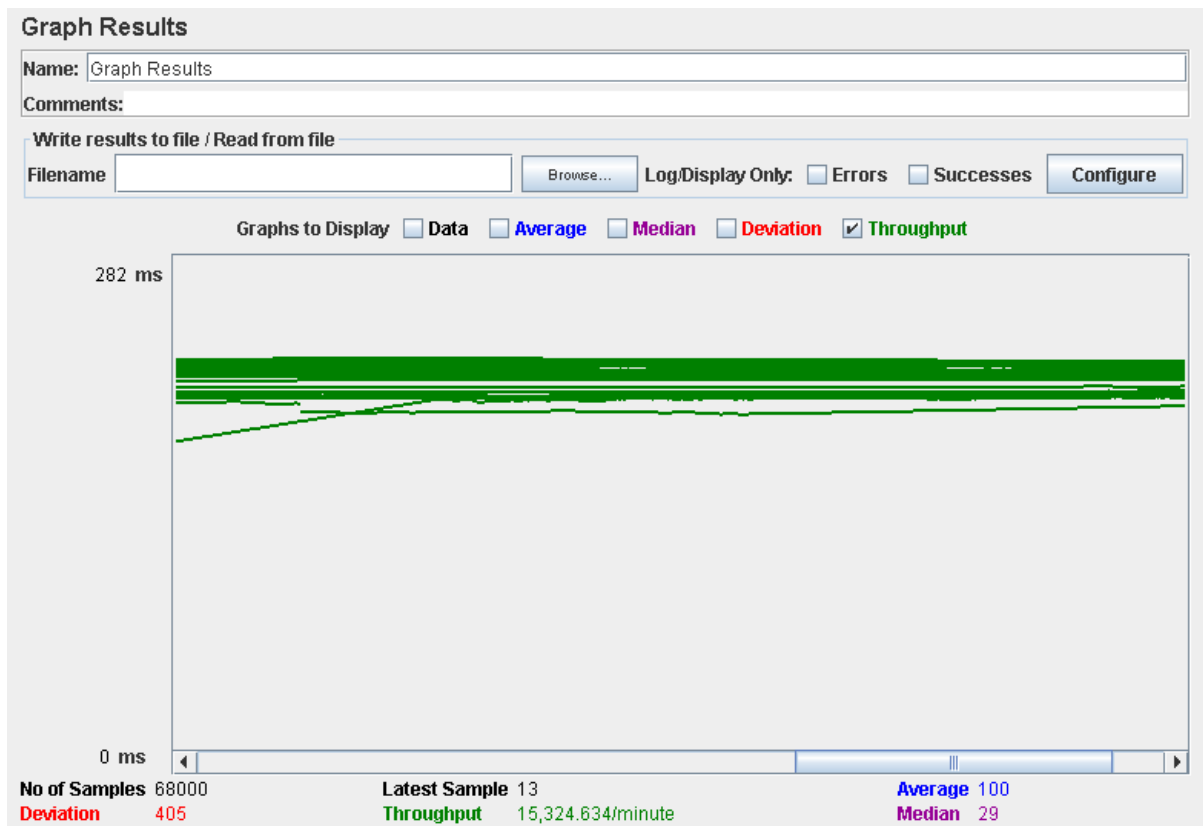
Performance test 90% results: Total 14,270s.

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file

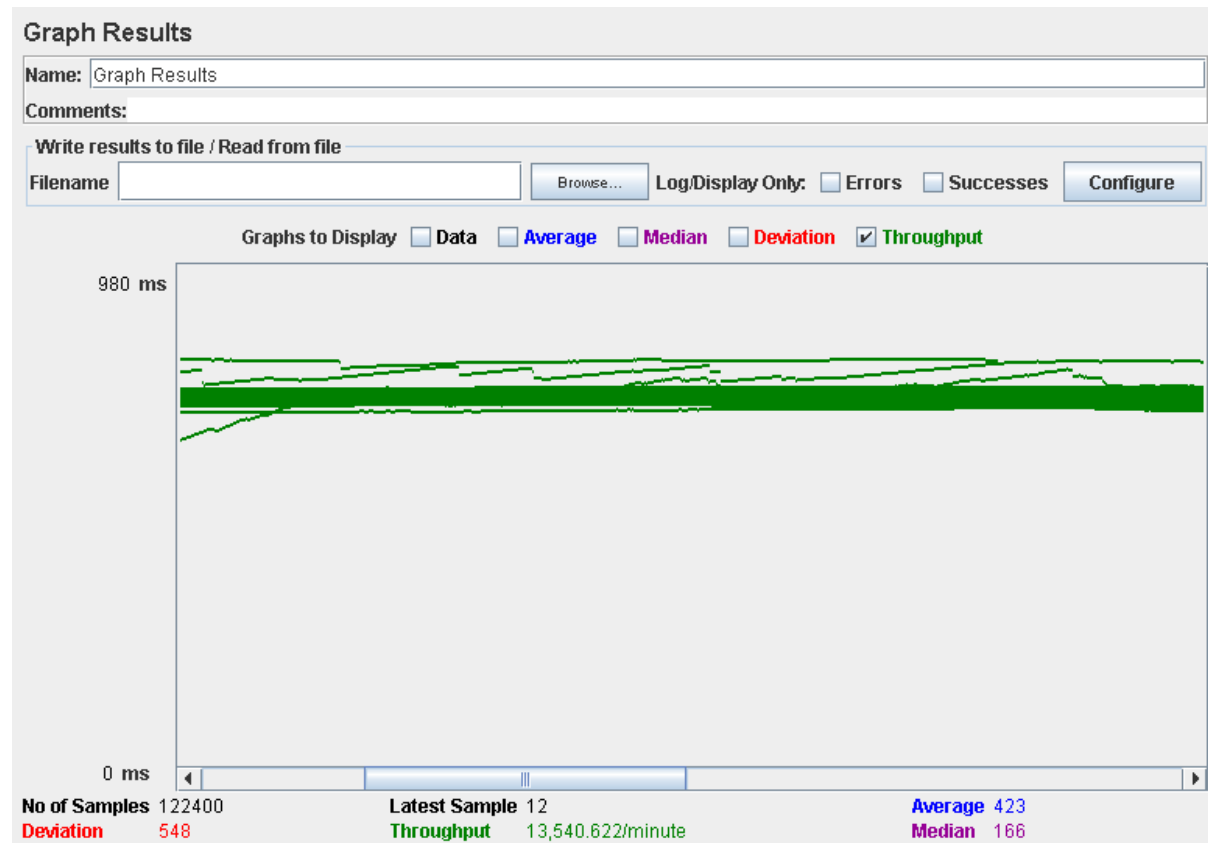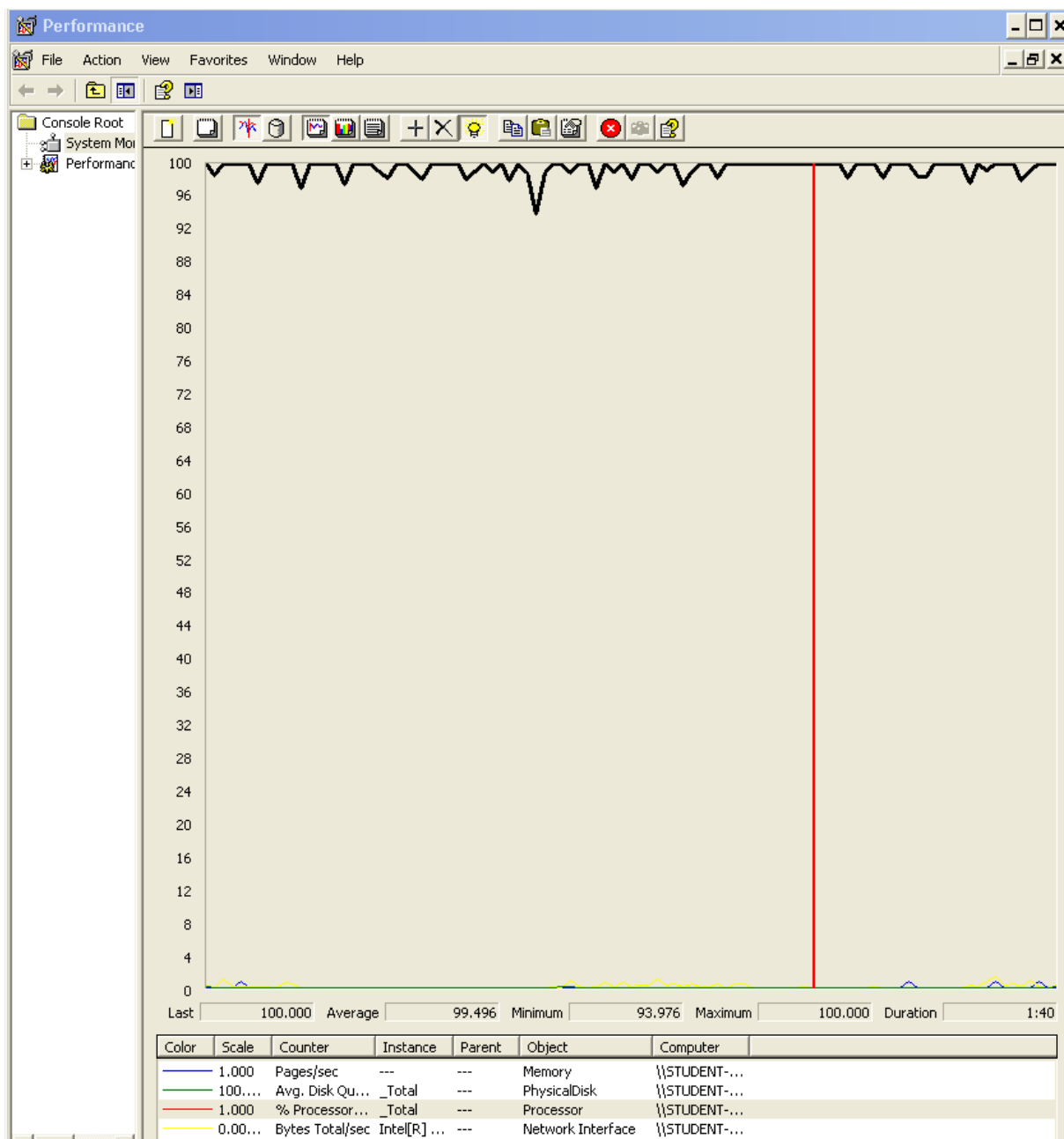**Filename** [   ] [Browse...] Log/Display Only: ☐ Errors ☐ Successes [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/curriculum/hacker/list.do	6800	541	409	1211	5	6300	0.00%	14.4/s...	47.9
/scripts/jquery-ui.js	13600	683	587	1350	12	4999	0.00%	28.8/s...	13078.8
/scripts/jquery.js	13600	478	376	1024	8	4661	0.00%	28.8/s...	7752.9
/styles/common.css	13600	150	55	455	1	2700	0.00%	28.8/s...	18.4
/styles/jmenu.css	13600	138	51	407	1	3250	0.00%	28.8/s...	56.0
/scripts/jmenu.js	13600	150	63	432	2	3387	0.00%	28.8/s...	306.1
/styles/displaytag.css	13600	142	53	426	2	3421	0.00%	28.8/s...	87.8
/images/logo.png	13600	136	58	376	2	3475	0.00%	28.8/s...	454.1
/curriculum/hacker/create.do	1700	519	377	1236	5	3276	0.00%	3.7/sec	12.3
/curriculum/hacker/display.do	3400	548	432	1220	6	3453	0.00%	7.4/sec	24.3
/personalData/hacker/create.do	1700	508	398	1140	7	3956	0.00%	3.8/sec	12.5
/personalData/hacker/edit.do	1700	519	404	1157	6	3499	0.00%	3.8/sec	12.2
/personalData/hacker/display.do	1700	572	423	1226	3	4408	0.00%	3.8/sec	12.5
/success.txt	1700	164	80	382	24	3494	0.00%	3.8/sec	1.4
/curriculum/hacker/delete.do	1700	514	405	1159	6	3610	0.00%	3.8/sec	12.6
TOTAL	115600	310	113	870	1	6300	0.00%	244.6/...	21880.5

Performance thread results: 14,674 per minute.

Graph Results

Name: Graph Results

Comments:

Write results to file / Read from file

Filename [   ] [Browse...] Log/Display Only: ☐ Errors ☐ Successes [Configure]

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

887 ms

0 ms

No of Samples 115600   **Latest Sample** 14   **Average** 310

Deviation 417   **Throughput** 14,674.489/minute   **Median** 113

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

⦿ Continue ◯ Start Next Thread Loop ◯ Stop Thread ◯ Stop Test ◯ Stop Test Now

Thread Properties

Number of Threads (users): 180

Ramp-Up Period (in seconds): 1

Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 17,227s.

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file

Filename [   ] Browse... Log/Display Only: ☐ Errors ☐ Successes [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/curriculum/hacker/list.do	7200	665	486	1542	6	7559	0.00%	13.3/s...	44.2
/scripts/jquery-ui.js	14400	901	761	1820	14	6405	0.00%	26.6/s...	12068.0
/scripts/jquery.js	14400	640	509	1353	8	7047	0.00%	26.6/s...	7153.7
/styles/common.css	14400	247	91	738	0	5558	0.02%	26.6/s...	17.0
/styles/jmenu.css	14400	220	78	667	1	5211	0.01%	26.6/s...	51.7
/scripts/jmenu.js	14400	233	92	686	1	5270	0.01%	26.6/s...	282.4
/styles/displaytag.css	14400	229	82	699	0	5124	0.01%	26.6/s...	81.0
/images/logo.png	14400	210	83	631	1	3747	0.01%	26.6/s...	419.0
/curriculum/hacker/create.do	1800	597	446	1336	6	7718	0.00%	3.4/sec	11.3
/curriculum/hacker/display.do	3600	657	514	1465	7	5575	0.00%	6.8/sec	22.3
/personalData/hacker/create.do	1800	629	474	1452	7	5273	0.00%	3.4/sec	11.3
/personalData/hacker/edit.do	1800	618	463	1430	7	4770	0.00%	3.4/sec	11.1
/personalData/hacker/display.do	1800	703	534	1603	7	3920	0.00%	3.4/sec	11.3
/success.txt	1800	186	97	412	24	3376	0.00%	3.4/sec	1.3
/curriculum/hacker/delete.do	1800	604	458	1392	7	5169	0.00%	3.5/sec	11.5
TOTAL	122400	423	166	1135	0	7718	0.01%	225.7/...	20190.0

Performance thread results: 13,540 per minute.

Graph Results

Name: Graph Results

Comments:

Write results to file / Read from file

Filename | Browse... | Log/Display Only: ☐ Errors ☐ Successes | Configure

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

980 ms

0 ms

No of Samples 122400   Latest Sample 12   Average 423
Deviation   548   Throughput   13,540.622/minute   Median   166

Computer performance:

Analysis results:

100 users and 10 loops: the application runs perfectly.

170 users and 10 loops: the application runs perfectly.

180 users and 10 loops: the application begins to have errors, the computer performance analysis shows it could be a processors bottleneck problem.

Requisite: 17.2

17. An actor who is authenticated as a hacker must be able to:

2. Manage his or her finder, which involves updating the search criteria, listing its contents, and clearing it.

```
Thread Group
Name: Thread Group
Comments:
Action to be taken after a Sampler error
    ● Continue  ○ Start Next Thread Loop  ○ Stop Thread  ○ Stop Test  ○ Stop Test Now

Thread Properties
Number of Threads (users): 100
Ramp-Up Period (in seconds): 1
Loop Count: ☐ Forever  10
☐ Delay Thread creation until needed
☐ Scheduler
```

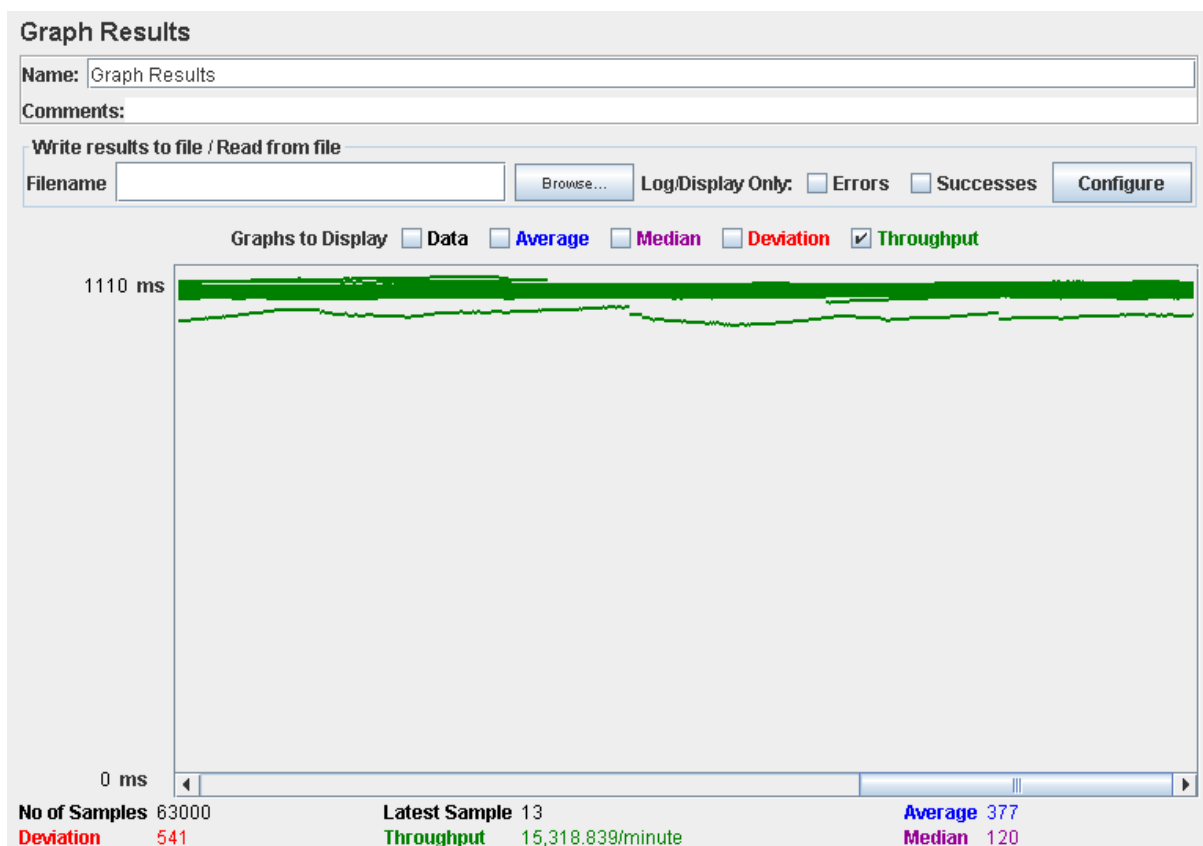Performance test 90% results: Total 2,464s.

Aggregate Report

Name: Aggregate Report
Comments:

Write results to file / Read from file
Filename [   ] Browse... Log/Display Only: ☐ Errors ☐ Successes Configure

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/finder/hacker/edit.do	3000	267	153	630	7	3472	0.00%	29.0/s...	95.3
/styles/jmenu.css	4000	27	20	46	2	1617	0.00%	38.0/s...	73.8
/styles/common.css	4000	25	18	46	1	1185	0.00%	38.1/s...	24.2
/styles/displaytag.css	4000	25	19	45	1	894	0.00%	38.0/s...	115.7
/scripts/jmenu.js	4000	32	25	57	2	749	0.00%	38.0/s...	404.3
/scripts/jquery.js	4000	186	148	380	8	2397	0.00%	38.0/s...	10243.8
/scripts/jquery-ui.js	4000	301	253	617	12	1741	0.00%	38.1/s...	17291.5
/images/logo.png	4000	30	22	50	2	1010	0.00%	38.0/s...	599.9
/images/arrow_off.png	3000	26	18	44	1	1263	0.00%	29.0/s...	14.5
/welcome/index.do	1000	216	114	549	7	2400	0.00%	10.0/s...	29.3
TOTAL	35000	103	30	312	1	3472	0.00%	332.5/...	28855.9

Performance thread results: 19,949 per minute.
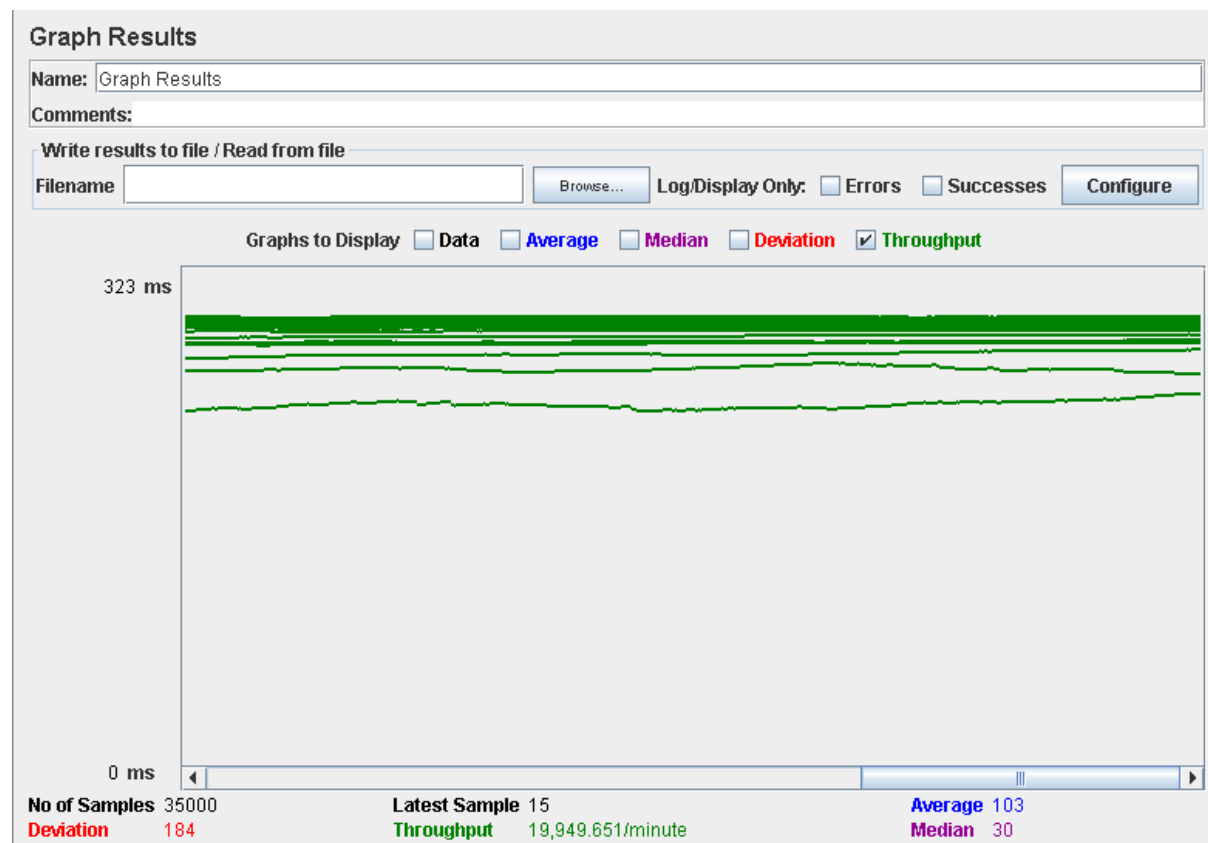
Performance test 90% results: Total 9,587s.

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file

Filename [   ] [Browse...] Log/Display Only: ☐ Errors ☐ Successes [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/finder/hacker/edit.do	5400	617	348	1470	7	12100	0.00%	22.1/s...	72.7
/styles/jmenu.css	7200	245	70	758	1	3247	0.00%	29.2/s...	56.8
/styles/common.css	7200	254	71	801	2	3982	0.00%	29.2/s...	18.7
/styles/displaytag.css	7200	208	62	657	2	3880	0.00%	29.2/s...	89.0
/scripts/jmenu.js	7200	240	77	733	2	3978	0.00%	29.2/s...	310.5
/scripts/jquery.js	7200	617	480	1338	8	5253	0.00%	29.2/s...	7862.9
/scripts/jquery-ui.js	7200	795	671	1651	13	5292	0.00%	29.2/s...	13269...
/images/logo.png	7200	230	75	703	2	3741	0.00%	29.2/s...	460.5
/images/arrow_off.png	5400	204	60	674	1	2813	0.00%	22.1/s...	11.1
/welcome/index.do	1800	376	203	902	6	4211	0.00%	7.5/sec	21.9
TOTAL	63000	377	120	1074	1	12100	0.00%	255.3/...	22159...

Performance thread results: 15,318 per minute.

Graph Results

Name: Graph Results

Comments:

Write results to file / Read from file

Filename [   ] [Browse...] Log/Display Only: ☐ Errors ☐ Successes [Configure]

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

1110 ms

0 ms

No of Samples 63000	**Latest Sample** 13	**Average** 377
Deviation 541	**Throughput** 15,318.839/minute	**Median** 120

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

◉ Continue ○ Start Next Thread Loop ○ Stop Thread ○ Stop Test ○ Stop Test Now

Thread Properties

Number of Threads (users): 190

Ramp-Up Period (in seconds): 1

Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 9.655s.

Aggregate Report

Name: Aggregate Report

Comments:

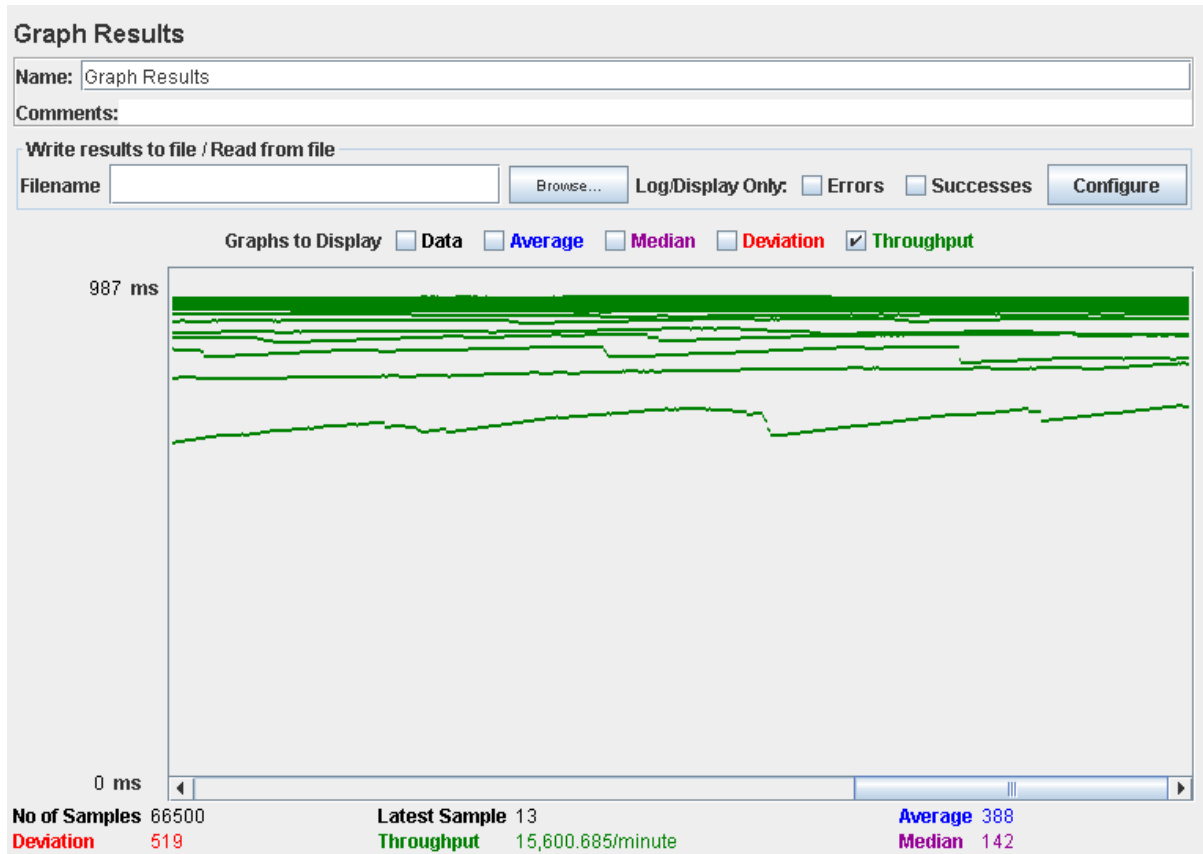**Write results to file / Read from file**

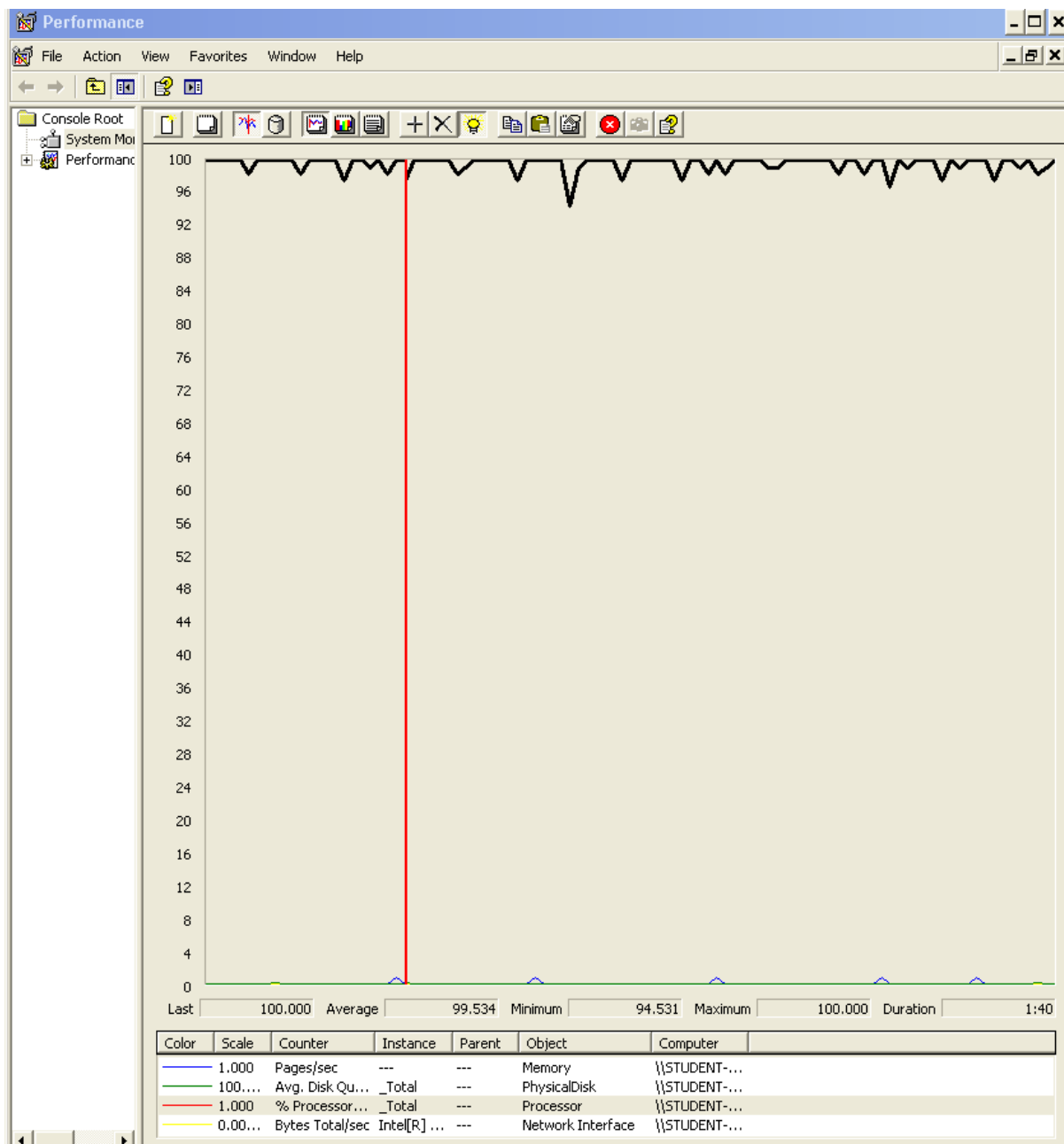Filename: _____ Browse... Log/Display Only: ☐ Errors ☐ Successes Configure

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/finder/hacker/edit.do	5700	596	376	1460	1	8303	0.04%	22.4/s...	74.0
/styles/jmenu.css	7600	257	78	775	1	3468	0.22%	29.7/s...	57.8
/styles/common.css	7600	253	81	754	1	4938	0.20%	29.7/s...	19.1
/styles/displaytag.css	7600	230	71	649	1	4139	0.21%	29.7/s...	90.6
/scripts/jmenu.js	7600	254	88	727	1	4000	0.29%	29.7/s...	315.5
/scripts/jquery.js	7600	604	501	1271	1	5385	0.08%	29.7/s...	8003.2
/scripts/jquery-ui.js	7600	831	714	1645	1	5105	0.12%	29.7/s...	13500...
/images/logo.png	7600	247	83	719	1	3505	0.25%	29.7/s...	468.2
/images/arrow_off.png	5700	225	68	693	0	4736	0.16%	22.5/s...	11.3
/welcome/index.do	1900	409	243	962	1	3430	0.16%	7.6/sec	22.4
TOTAL	66500	388	142	1064	0	8303	0.18%	260.0/...	22542...

Performance thread results: 15,600 per minute.

Graph Results

Name: Graph Results

Comments:

Write results to file / Read from file

Filename: [_____] Browse... Log/Display Only: ☐ Errors ☐ Successes Configure

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

987 ms

0 ms

No of Samples 66500   Latest Sample 13   Average 388
Deviation   519   Throughput   15,600.685/minute   Median 142

Computer performance:

Analysis results:

100 users and 10 loops: the application runs perfectly.

180 users and 10 loops: the application runs perfectly.

190 users and 10 loops: the application begins to have errors, the computer performance analysis shows it could be a processors bottleneck problem.

23. An actor who is authenticated must be able to:

> 1. Manage his or her social profiles, which includes listing, showing, creating, updating, and deleting them.

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

◉ Continue ○ Start Next Thread Loop ○ Stop Thread ○ Stop Test ○ Stop Test Now

Thread Properties

Number of Threads (users): 100

Ramp-Up Period (in seconds): 1

Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 3,399s.

Aggregate Report
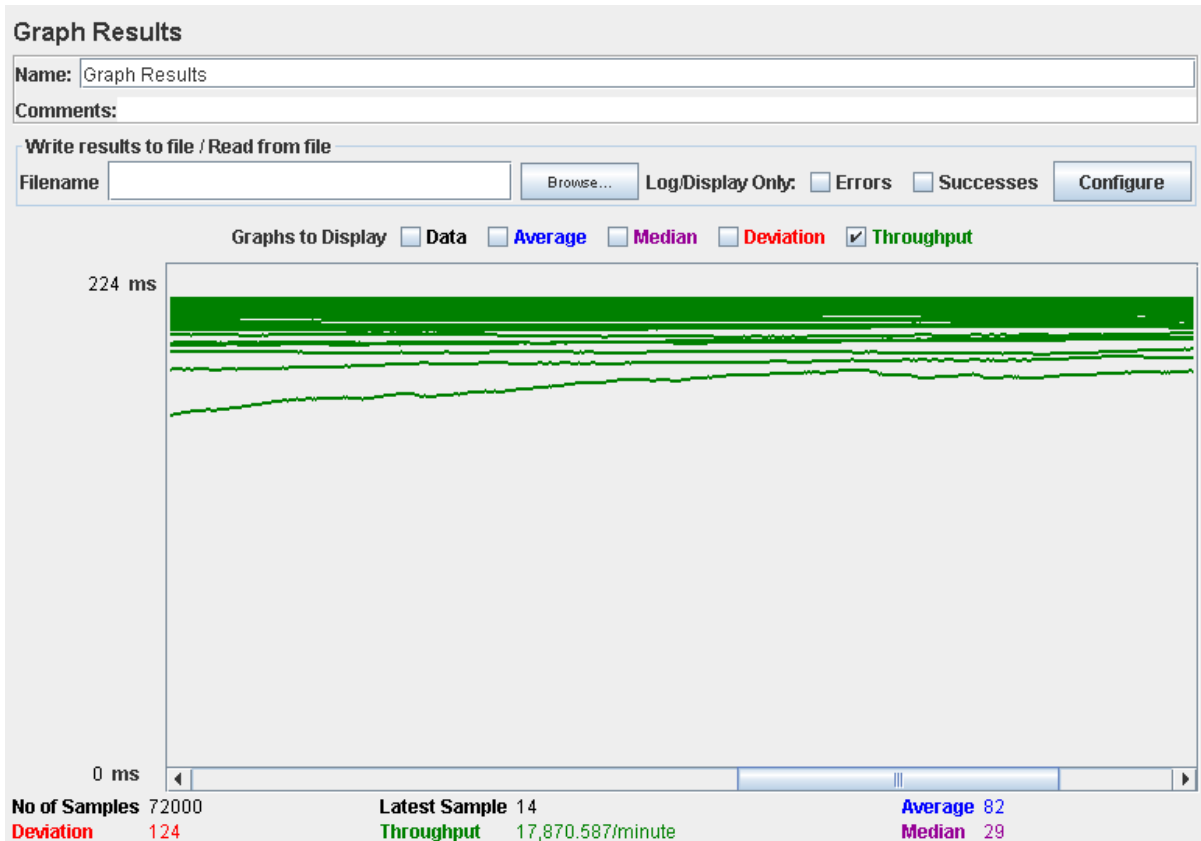
Name: Aggregate Report

Comments:

Write results to file / Read from file

Filename: [   ] Browse... Log/Display Only: ☐ Errors ☐ Successes [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
images/arrow_down.png	1000	35	19	54	3	1471	0.00%	4.5/sec	2.3
socialProfile/list.do	3000	190	120	450	8	1807	0.00%	12.7/s...	42.3
scripts/jquery.js	8000	144	121	273	8	1246	0.00%	33.3/s...	8974.8
scripts/jquery-ui.js	8000	222	194	420	13	1298	0.00%	33.3/s...	15143.3
styles/common.css	8000	22	17	41	1	693	0.00%	33.3/s...	21.2
scripts/jmenu.js	8000	26	21	46	2	671	0.00%	33.3/s...	354.4
styles/jmenu.css	8000	22	17	40	2	601	0.00%	33.3/s...	64.7
styles/displaytag.css	8000	22	17	42	2	691	0.00%	33.3/s...	101.5
images/arrow_off.png	4000	21	16	38	2	932	0.00%	16.7/s...	8.3
images/logo.png	8000	24	20	43	2	714	0.00%	33.3/s...	526.0
socialProfile/create.do	1000	188	110	464	10	1778	0.00%	4.5/sec	14.8
socialProfile/edit.do	3000	180	105	461	4	1484	0.00%	13.0/s...	42.2
success.txt	1000	48	39	77	24	250	0.00%	4.5/sec	1.7
socialProfile/display.do	2000	191	113	477	6	1386	0.00%	8.7/sec	28.4
socialProfile/delete.do	1000	186	113	473	5	947	0.00%	4.5/sec	14.8
TOTAL	72000	82	29	239	1	1807	0.00%	297.8/...	25160.3

Performance thread results: 17,780 per minute.

Performance test 90% results: Total 8,147s.

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file

Filename [ ] Browse... Log/Display Only: ☐ Errors ☐ Successes [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/images/arrow_down.png	1500	128	44	334	2	3786	0.00%	4.3/sec	2.2
/socialProfile/list.do	4500	435	331	931	4	4154	0.00%	12.3/s...	41.2
/scripts/jquery.js	12000	373	319	717	9	2967	0.00%	32.6/s...	8783.0
/scripts/jquery-ui.js	12000	550	485	1044	13	3298	0.00%	32.6/s...	14818.5
/styles/common.css	12000	95	40	225	2	2684	0.00%	32.6/s...	20.9
/scripts/jmenu.js	12000	102	48	244	2	1889	0.00%	32.6/s...	346.9
/styles/jmenu.css	12000	95	40	222	1	1708	0.00%	32.6/s...	63.5
/styles/displaytag.css	12000	96	41	234	1	1924	0.00%	32.6/s...	99.5
/images/arrow_off.png	6000	86	38	198	1	1757	0.00%	16.3/s...	8.2
/images/logo.png	12000	100	46	233	2	1828	0.00%	32.6/s...	514.6
/socialProfile/create.do	1500	447	371	937	8	3810	0.00%	4.3/sec	14.1
/socialProfile/edit.do	4500	414	331	881	3	3148	0.00%	12.5/s...	40.8
/success.txt	1500	83	52	137	25	1549	0.00%	4.3/sec	1.6
/socialProfile/display.do	3000	415	342	865	5	3142	0.00%	8.4/s...	27.7
/socialProfile/delete.do	1500	376	280	845	3	2166	0.00%	4.4/sec	14.4
TOTAL	108000	223	73	637	1	4154	0.00%	292.2/...	24684.6

Performance thread results: 17,531 per minute.

Graph Results

Name: Graph Results

Comments:

Write results to file / Read from file

Filename [ ] Browse... Log/Display Only: ☐ Errors ☐ Successes [Configure]

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

No of Samples 108000	**Latest Sample** 12		**Average** 223
Deviation 303	**Throughput** 17,531.519/minute		**Median** 73

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

○ Continue ○ Start Next Thread Loop ○ Stop Thread ○ Stop Test ○ Stop Test Now

Thread Properties

Number of Threads (users): 160

Ramp-Up Period (in seconds): 1

Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 10,816s.

Aggregate Report

Name: Aggregate Report

Comments:

**Write results to file / Read from file**

Filename: _____ Browse... Log/Display Only: ☐ Errors ☐ Successes Configure

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/images/arrow_down.png	1700	148	45	448	2	3979	0.00%	4.0/sec	2.0
/socialProfile/list.do	5100	491	360	1091	4	4295	0.00%	11.6/s...	38.6
/scripts/jquery.js	13600	437	349	888	9	3855	0.00%	30.6/s...	8242.8
/scripts/jquery-ui.js	13600	611	526	1174	13	4194	0.01%	30.6/s...	13905.5
/styles/common.css	13600	155	49	524	2	2212	0.01%	30.6/s...	19.6
/scripts/jmenu.js	13600	163	60	517	2	2029	0.01%	30.6/s...	325.6
/styles/jmenu.css	13600	155	50	507	2	2199	0.00%	30.6/s...	59.6
/styles/displaytag.css	13600	159	49	523	2	2032	0.00%	30.6/s...	93.4
/images/arrow_off.png	6800	129	42	409	1	1729	0.00%	15.3/s...	7.7
/images/logo.png	13600	151	53	471	2	2219	0.00%	30.6/s...	483.3
/socialProfile/create.do	1700	450	335	969	7	3403	0.00%	4.0/sec	13.2
/socialProfile/edit.do	5100	482	375	1059	3	3688	0.00%	11.8/s...	38.4
/success.txt	1700	92	60	161	23	1309	0.00%	4.0/sec	1.5
/socialProfile/display.do	3400	468	345	1057	3	4445	0.03%	7.9/sec	26.2
/socialProfile/delete.do	1700	442	308	1018	6	2895	0.00%	4.2/sec	13.8
TOTAL	122400	280	97	783	1	4445	0.00%	274.5/...	23188.7

Performance thread results: 16,469 per minute.
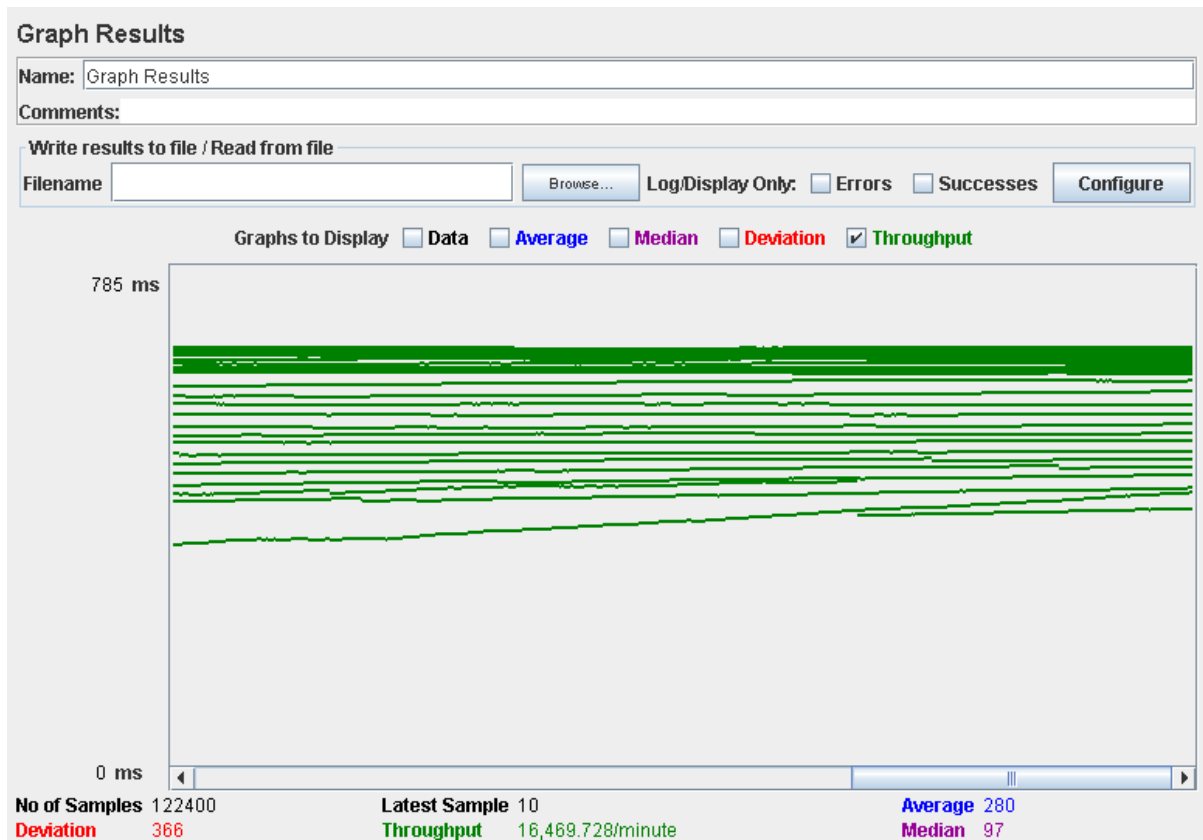
Computer performance:
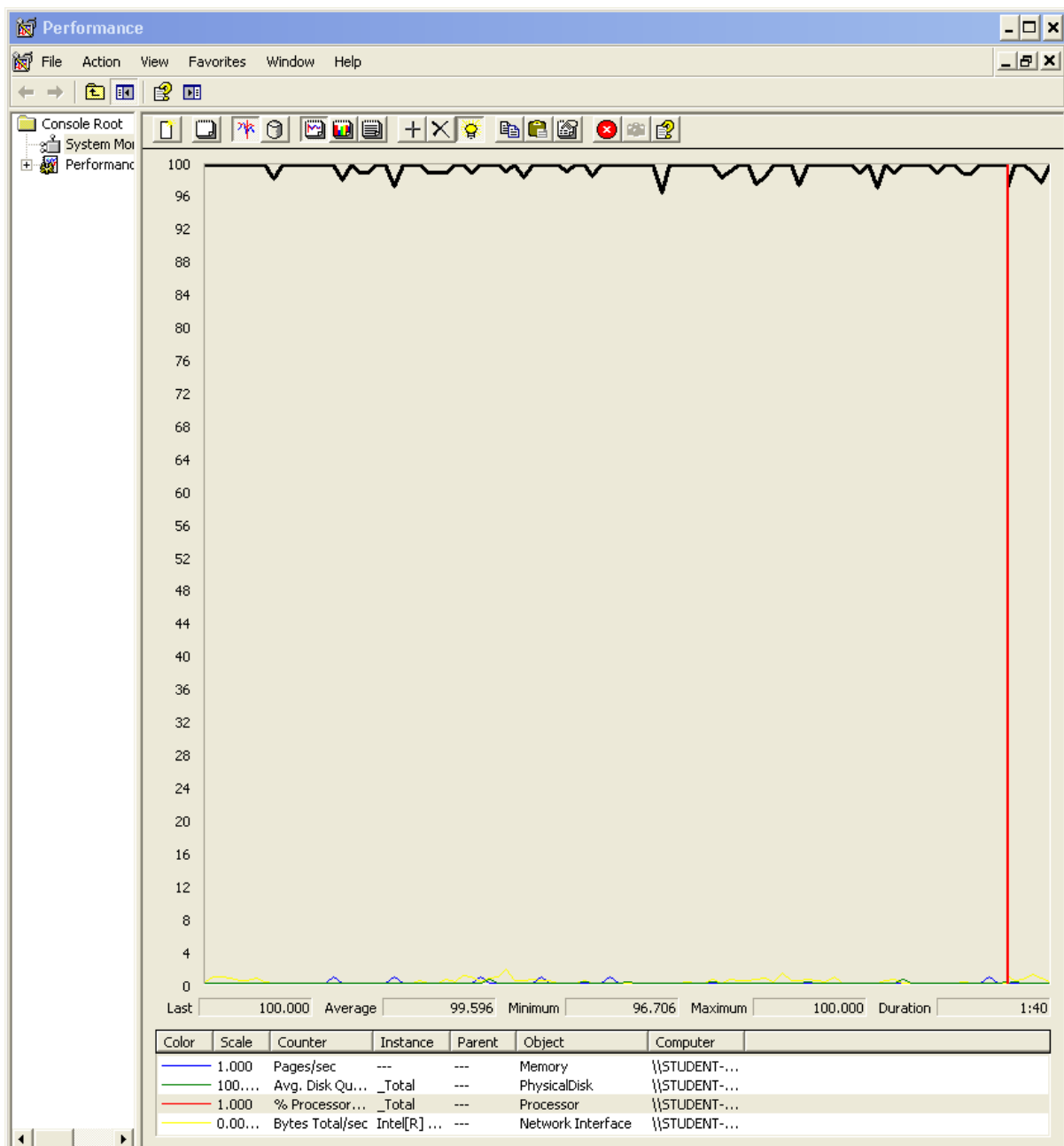
Analysis results:

100 users and 10 loops: the application runs perfectly.

150 users and 10 loops: the application runs perfectly.

160 users and 10 loops: the application begins to have errors, the computer performance analysis shows it could be a processors bottleneck problem.

Requisite: 23.2

23. An actor who is authenticated must be able to:

2. Manage his or her messages, which includes listing them grouped by tag, showing them, sending a message to an actor, deleting a message that he or she's got. If a message is deleted and it doesn't have tag "DELETED" then it gets tag "DELETED", but it's not actually deleted from the system; if a message with tag "DELETED" is deleted, then it's actually removed from the system.

Thread Group

Name: Thread Group
Comments:

Action to be taken after a Sampler error

◉ Continue ○ Start Next Thread Loop ○ Stop Thread ○ Stop Test ○ Stop Test Now

Thread Properties

Number of Threads (users): 100
Ramp-Up Period (in seconds): 1
Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 1,226s.
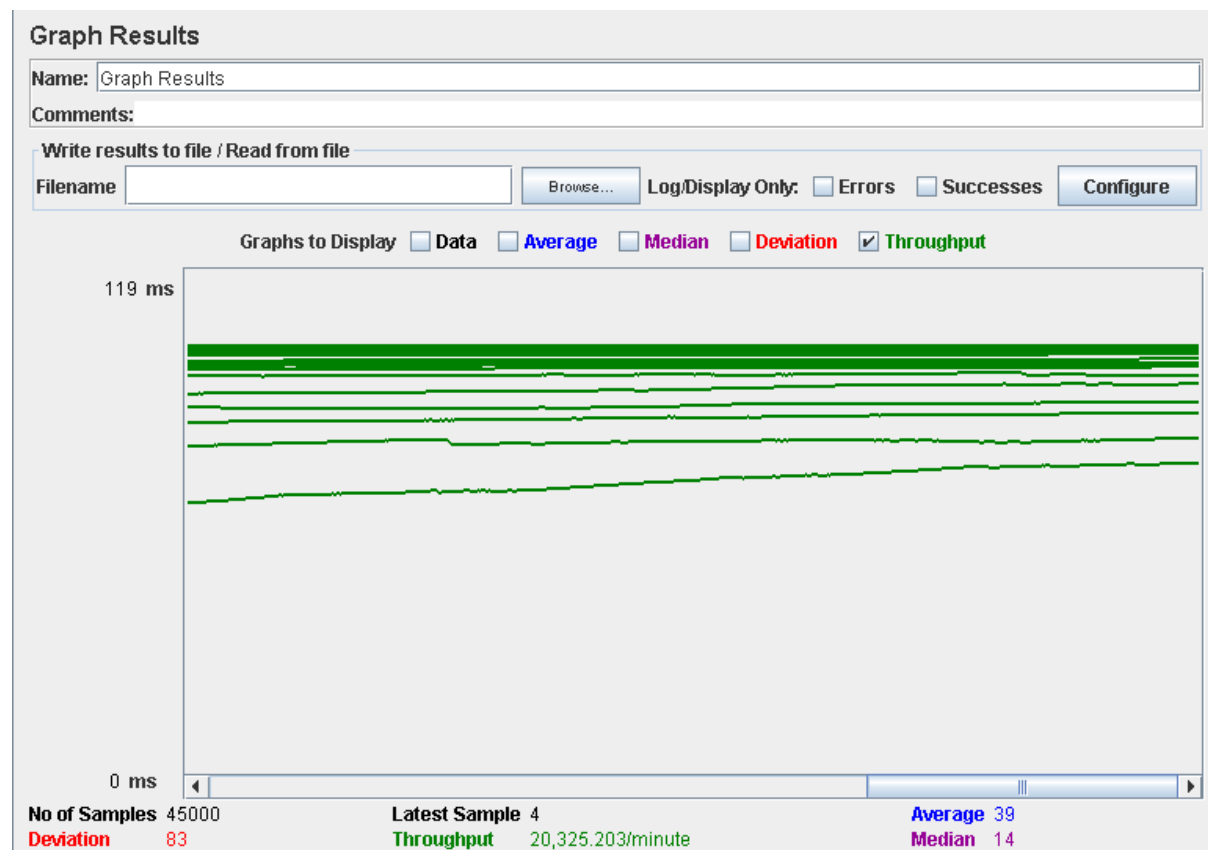
Aggregate Report

Name: Aggregate Report
Comments:

Write results to file / Read from file

Filename: [   ] Browse... Log/Display Only: ☐ Errors ☐ Successes [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/message/list.do	3000	85	33	181	5	3894	0.00%	22.8/s...	75.8
/scripts/jquery.js	5000	77	57	158	7	1222	0.00%	37.7/s...	10148...
/scripts/jmenu.js	5000	12	10	25	1	828	0.00%	37.7/s...	400.6
/styles/common.css	5000	10	7	21	1	332	0.00%	37.7/s...	23.9
/styles/jmenu.css	5000	10	7	20	1	861	0.00%	37.7/s...	73.1
/scripts/jquery-ui.js	5000	115	85	247	11	1009	0.00%	37.7/s...	17112...
/styles/displaytag.css	5000	10	7	20	1	788	0.00%	37.7/s...	114.7
/images/arrow_off.png	3000	10	7	20	1	1072	0.00%	22.8/s...	11.4
/images/logo.png	5000	11	9	23	1	236	0.00%	37.7/s...	594.2
/message/edit.do	2000	65	28	175	4	773	0.00%	16.0/s...	51.9
/message/delete.do	1000	50	24	118	4	719	0.00%	8.1/sec	26.7
/message/display.do	1000	78	37	218	6	992	0.00%	8.2/sec	27.0
TOTAL	45000	39	14	106	1	3894	0.00%	338.8/...	28633...

Performance thread results: 20,325 per minute.

Graph Results

Name: Graph Results

Comments:

Write results to file / Read from file

Filename: [   ] Browse... Log/Display Only: ☐ Errors ☐ Successes [Configure]

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

119 ms

0 ms

No of Samples	45000	Latest Sample	4		Average	39
Deviation	83	Throughput	20,325.203/minute		Median	14

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

◉ Continue ○ Start Next Thread Loop ○ Stop Thread ○ Stop Test ○ Stop Test Now

Thread Properties

Number of Threads (users): 180

Ramp-Up Period (in seconds): 1

Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 11,148s.

Aggregate Report

Name: Aggregate Report

Comments:

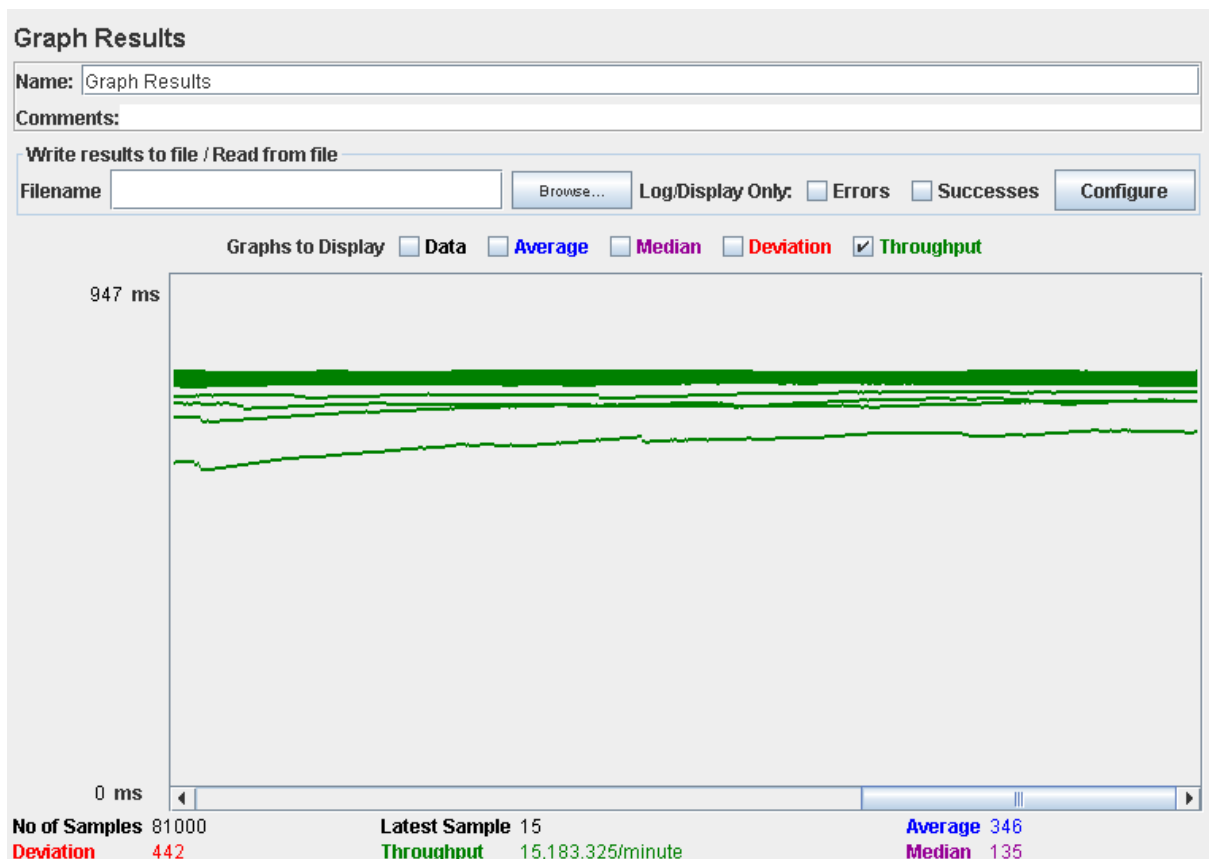Write results to file / Read from file

Filename [   ] Browse...   Log/Display Only: ☐ Errors   ☐ Successes   [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/message/list.do	5400	604	452	1441	6	9051	0.00%	17.0/s...	56.7
/scripts/jquery.js	9000	536	443	1098	10	2992	0.00%	28.1/s...	7577.2
/scripts/jmenu.js	9000	216	87	647	2	2576	0.00%	28.1/s...	299.2
/styles/common.css	9000	185	69	573	1	2950	0.00%	28.1/s...	18.0
/styles/jmenu.css	9000	193	73	592	2	2981	0.00%	28.1/s...	54.8
/scripts/jquery-ui.js	9000	721	619	1458	12	4404	0.00%	28.1/s...	12781...
/styles/displaytag.css	9000	188	67	585	1	2814	0.00%	28.1/s...	85.8
/images/arrow_off.png	5400	178	63	540	1	2654	0.00%	17.0/s...	8.5
/images/logo.png	9000	179	72	543	2	2635	0.00%	28.1/s...	443.8
/message/edit.do	3600	544	423	1276	7	3326	0.00%	11.5/s...	37.7
/message/delete.do	1800	534	432	1214	4	3246	0.00%	5.8/sec	19.2
/message/display.do	1800	517	402	1181	7	3764	0.00%	5.9/sec	19.4
TOTAL	81000	346	135	938	1	9051	0.00%	253.1/...	21391...

Performance thread results: 15,183 per minute.

Graph Results

Name: Graph Results

Comments:

Write results to file / Read from file

Filename [   ] Browse...   Log/Display Only: ☐ Errors   ☐ Successes   [Configure]

Graphs to Display ☐ **Data** ☐ **Average** ☐ **Median** ☐ **Deviation** ☑ **Throughput**

947 ms

0 ms

No of Samples	81000	Latest Sample	15		Average	346
Deviation	442	**Throughput**	15,183.325/minute		**Median**	135

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

◉ Continue ○ Start Next Thread Loop ○ Stop Thread ○ Stop Test ○ Stop Test Now

Thread Properties

Number of Threads (users): 190

Ramp-Up Period (in seconds): 1

Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 11,654s.

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file

**Filename:** [　　　　　　　　] Browse... Log/Display Only: ☐ Errors ☐ Successes [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throu...	KB/sec
/message/list.do	5700	626	494	1397	1	11217	0.05%	16.9/s...	56.4
/scripts/jquery.js	9500	580	480	1191	1	4178	0.05%	28.0/s...	7535.6
/scripts/jmenu.js	9500	243	100	712	1	2946	0.12%	28.0/s...	297.5
/styles/common.css	9500	199	78	601	1	2506	0.11%	28.0/s...	18.0
/styles/jmenu.css	9500	207	78	633	0	2454	0.12%	28.0/s...	54.5
/scripts/jquery-ui.js	9500	752	660	1481	0	3904	0.07%	28.0/s...	12709...
/styles/displaytag.css	9500	198	73	605	0	2974	0.18%	28.0/s...	85.3
/images/arrow_off.png	5700	186	68	576	1	2326	0.16%	16.9/s...	8.5
/images/logo.png	9500	201	80	605	0	2471	0.14%	28.0/s...	441.2
/message/edit.do	3800	583	465	1320	6	3887	0.00%	11.5/s...	37.4
/message/delete.do	1900	558	426	1289	6	4482	0.00%	5.8/sec	19.1
/message/display.do	1900	554	441	1244	7	4169	0.00%	5.8/sec	19.3
TOTAL	85500	369	157	974	0	11217	0.10%	251.8/...	21269...

Performance thread results: 15,106 per minute.
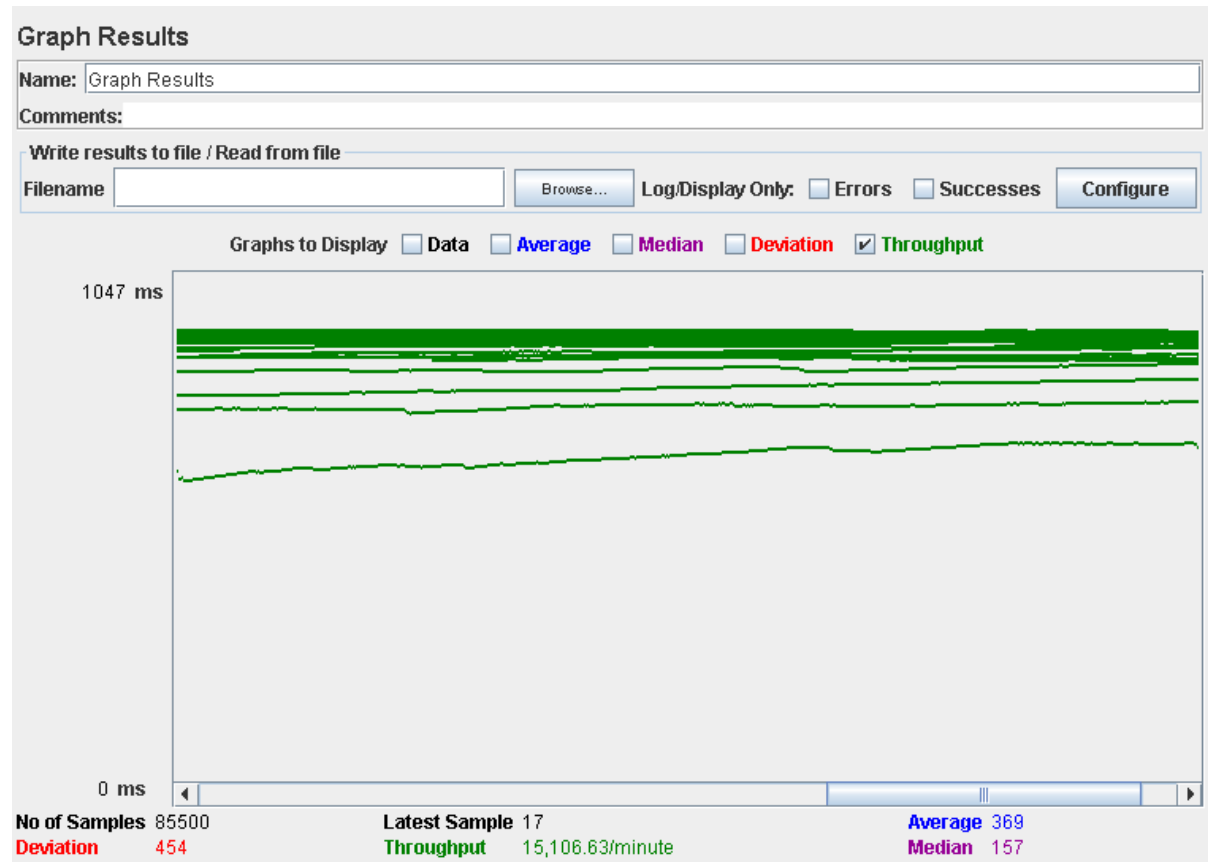
Computer performance:
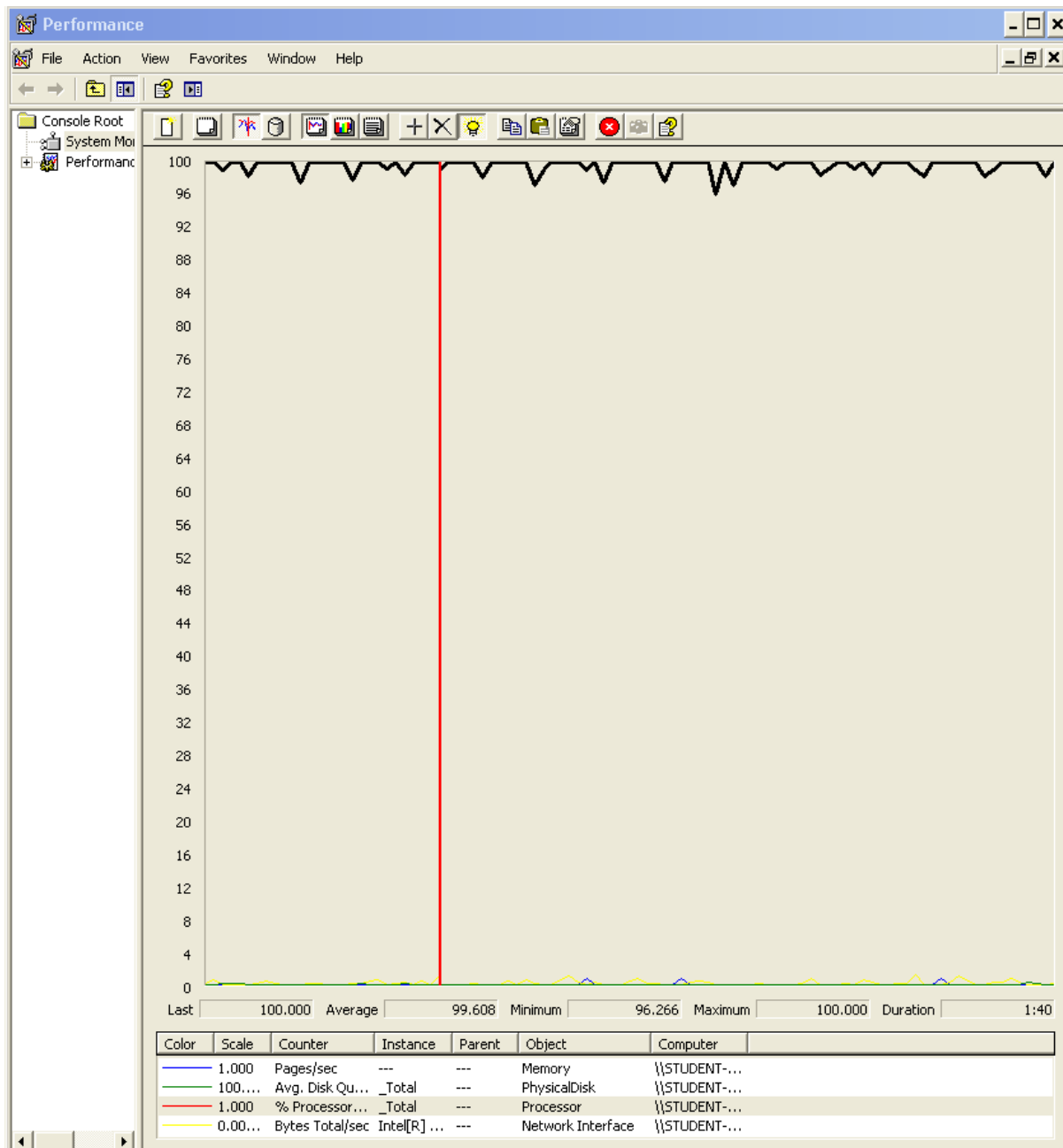
Analysis results:

100 users and 10 loops: the application runs perfectly.

180 users and 10 loops: the application runs perfectly.

190 users and 10 loops: the application begins to have errors, the computer performance analysis shows it could be a processors bottleneck problem.

24. An actor who is authenticated as an administrator must be able to:

1. Broadcast a notification message to the actors of the system. The message must have tag "SYSTEM" by default.

2. Launch a process that flags the actors of the system as spammers or not-spammers. A user is considered to be a spammer if at least 10% of the messages that he or she's sent contain at least one spam word.

3. Ban an actor with the spammer flag.

4. Unban an actor who was banned previously.

Thread Group

Name: Thread Group
Comments:
Action to be taken after a Sampler error
○ Continue ○ Start Next Thread Loop ○ Stop Thread ○ Stop Test ○ Stop Test Now

Thread Properties
Number of Threads (users): 100
Ramp-Up Period (in seconds): 1
Loop Count: ☐ Forever 10
☐ Delay Thread creation until needed
☐ Scheduler

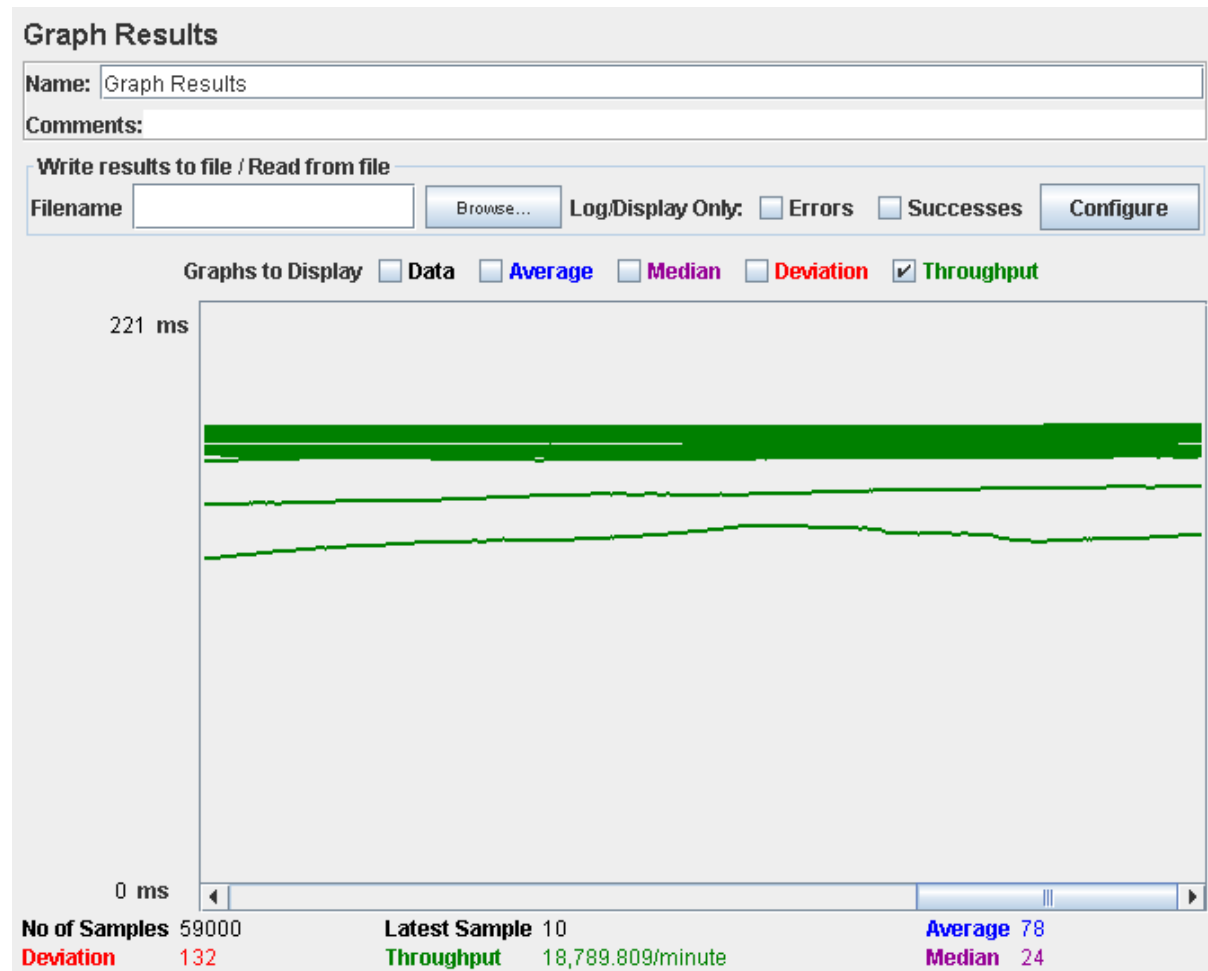Performance test 90% results: Total 3,300s.

Aggregate Report

Name: Aggregate Report
Comments:
Write results to file / Read from file
Filename [   ] Browse... Log/Display Only: ☐ Errors ☐ Successes Configure

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Thr...	KB/...
/images/arrow_down.png	2000	19	13	37	1	752	0.00%	11....	5.8
/administrator/flagSpam.do	1000	172	79	469	6	1416	0.00%	5.9/...	20.2
/administrator/bannableList.do	3000	173	85	460	6	1639	0.00%	16....	55.5
/styles/common.css	6000	20	15	39	1	571	0.00%	32....	20.5
/styles/jmenu.css	6000	20	15	39	1	705	0.00%	32....	62.7
/scripts/jquery.js	6000	134	110	264	8	1235	0.00%	32....	870...
/styles/displaytag.css	6000	19	15	37	1	553	0.00%	32....	98.4
/scripts/jmenu.js	6000	22	17	42	1	758	0.00%	32....	343.5
/scripts/jquery-ui.js	6000	207	171	412	12	1610	0.00%	32....	146...
/images/arrow_off.png	5000	18	14	36	1	381	0.00%	26....	13.4
/images/logo.png	6000	21	17	40	2	338	0.00%	32....	509.7
/administrator/ban.do	2000	156	82	403	5	1567	0.00%	11....	37.5
/message/list.do	2000	194	100	494	6	1609	0.00%	11....	36.8
/message/administrator/edit.do	2000	202	118	528	8	1704	0.00%	11....	36.8
TOTAL	59000	78	24	225	1	1704	0.00%	313...	242...

Performance thread results: 18,789 per minute.

Graph Results

Name:	Graph Results
Comments:	

Write results to file / Read from file

Filename [   ] Browse...   Log/Display Only: ☐ Errors ☐ Successes   Configure

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

221 ms

0 ms

No of Samples	59000	Latest Sample	10		Average	78
Deviation	132	Throughput	18,789.809/minute		Median	24

Thread Group

Name: Thread Group

Comments:

Action to be taken after a Sampler error

(•) Continue   ( ) Start Next Thread Loop   ( ) Stop Thread   ( ) Stop Test   ( ) Stop Test Now

Thread Properties

Number of Threads (users): 160

Ramp-Up Period (in seconds): 1

Loop Count: ☐ Forever   10

☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 9,987s.

Aggregate Report

Name: Aggregate Report

Comments:

Write results to file / Read from file

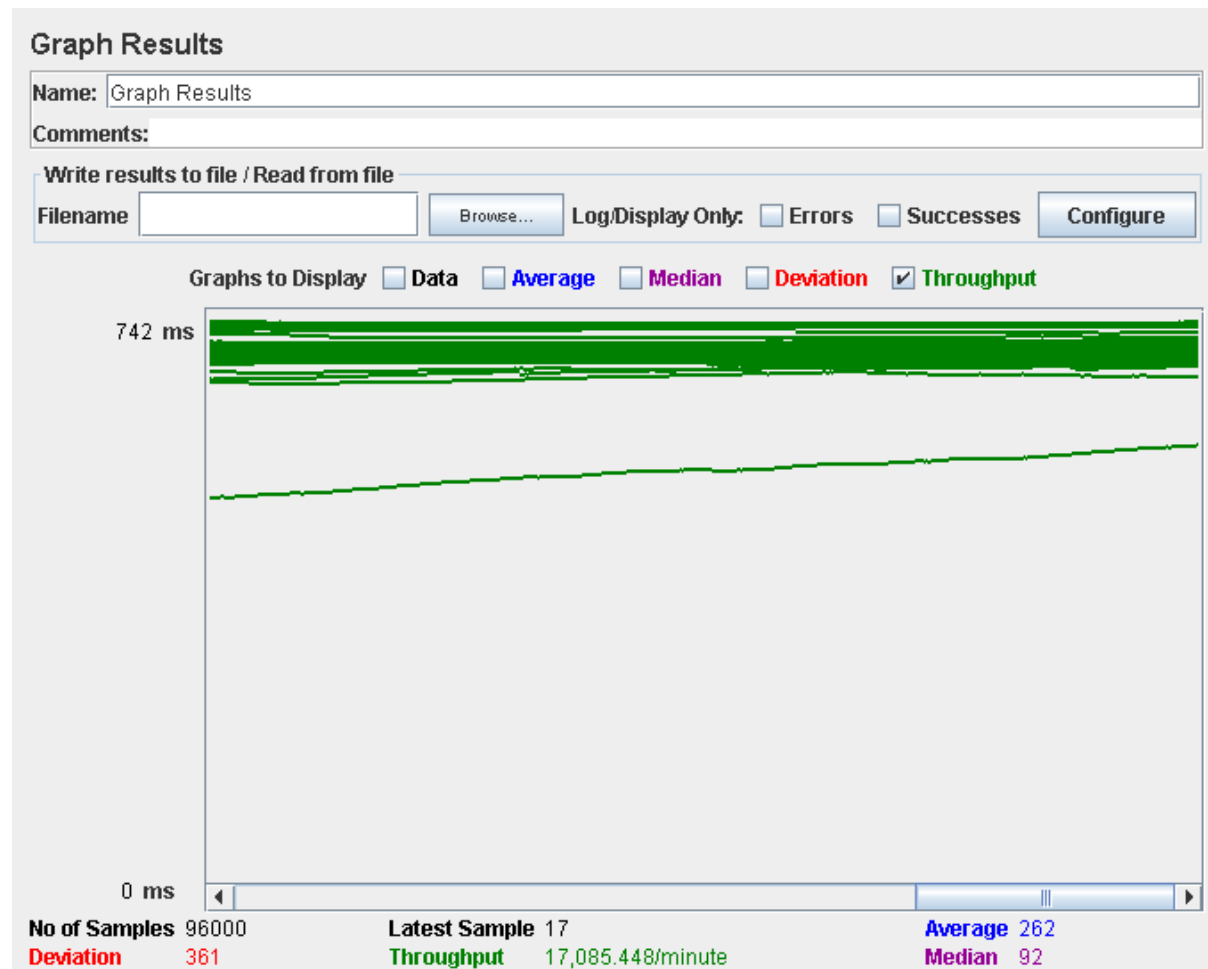**Filename:** [   ]   Browse...   Log/Display Only: ☐ Errors ☐ Successes   Configure

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Thr...	KB/...
/images/arrow_down.png	3200	109	41	311	2	2031	0.00%	9.8/...	5.0
/administrator/flagSpam.do	1600	461	327	1049	6	6895	0.00%	5.0/...	17.0
/administrator/bannableList.do	4800	512	364	1148	4	3921	0.00%	14....	48.2
/styles/common.css	9600	136	49	411	1	2935	0.00%	28...	18.4
/styles/jmenu.css	9600	127	48	372	1	2488	0.00%	28...	55.9
/scripts/jquery.js	9600	415	329	858	7	3565	0.00%	28...	774...
/styles/displaytag.css	9600	124	47	364	1	2377	0.00%	28...	87.6
/scripts/jmenu.js	9600	125	55	359	2	2832	0.00%	28...	305.6
/scripts/jquery-ui.js	9600	576	487	1142	14	4041	0.00%	28...	130...
/images/arrow_off.png	8000	112	42	307	1	3089	0.00%	23...	12.0
/images/logo.png	9600	119	51	340	2	2022	0.00%	28...	453.4
/administrator/ban.do	3200	477	406	1015	6	3998	0.00%	9.8/...	32.2
/message/list.do	3200	537	461	1155	5	3356	0.00%	9.8/...	32.4
/message/administrator/edit.do	3200	484	380	1047	5	4149	0.00%	9.9/...	32.3
/	1600	218	157	468	6	2610	0.00%	5.1/...	14.8
TOTAL	96000	262	92	737	1	6895	0.00%	284...	217...

Performance thread results: 17,085 per minute.

Graph Results

Name: Graph Results

Comments:

Write results to file / Read from file

Filename: [   ] [Browse...] **Log/Display Only:** ☐ Errors ☐ Successes [**Configure**]

Graphs to Display ☐ Data ☐ Average ☐ Median ☐ Deviation ☑ Throughput

742 ms

0 ms

No of Samples	96000	Latest Sample	17	Average	262
Deviation	361	Throughput	17,085.448/minute	Median	92

Thread Group

Name: Thread Group
Comments:

Action to be taken after a Sampler error

(•) Continue ( ) Start Next Thread Loop ( ) Stop Thread ( ) Stop Test ( ) Stop Test Now

Thread Properties

Number of Threads (users): 170
Ramp-Up Period (in seconds): 1
Loop Count: ☐ Forever 10

☐ Delay Thread creation until needed

☐ Scheduler

Performance test 90% results: Total 15,440s.

Aggregate Report

Name: Aggregate Report
Comments:

Write results to file / Read from file
Filename: _____ [Browse...] Log/Display Only: ☐ Errors ☐ Successes [Configure]

Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Thr...	KB/...
/images/arrow_down.png	3400	185	60	555	2	4045	0.00%	8.5/...	4.3
/administrator/flagSpam.do	1700	728	490	1589	8	5859	0.12%	4.3/...	14.6
/administrator/bannableList.do	5100	828	626	1842	4	7277	0.06%	12....	41.9
/styles/common.css	10200	216	72	685	1	3362	0.06%	25....	16.1
/styles/jmenu.css	10200	202	70	637	2	3068	0.03%	25....	48.8
/scripts/jquery.js	10200	571	451	1223	8	4461	0.00%	25....	675...
/styles/displaytag.css	10200	198	66	628	2	2844	0.00%	25....	76.5
/scripts/jmenu.js	10200	200	79	610	2	3196	0.00%	25....	266.7
/scripts/jquery-ui.js	10200	807	682	1668	13	4943	0.00%	25....	113...
/images/arrow_off.png	8500	164	58	523	1	2407	0.00%	20....	10.5
/images/logo.png	10200	174	69	526	2	2777	0.00%	25....	395.8
/administrator/ban.do	3400	645	494	1432	3	4978	0.00%	8.5/...	28.0
/message/list.do	3400	689	585	1525	3	5592	0.00%	8.6/...	28.5
/message/administrator/edit.do	3400	573	394	1306	4	4761	0.00%	8.7/...	28.4
/	1700	306	208	691	6	2284	0.00%	4.4/...	13.0
TOTAL	102000	379	132	1061	1	7277	0.01%	247...	188...

Performance thread results: 14,859 per minute.

Computer performance:
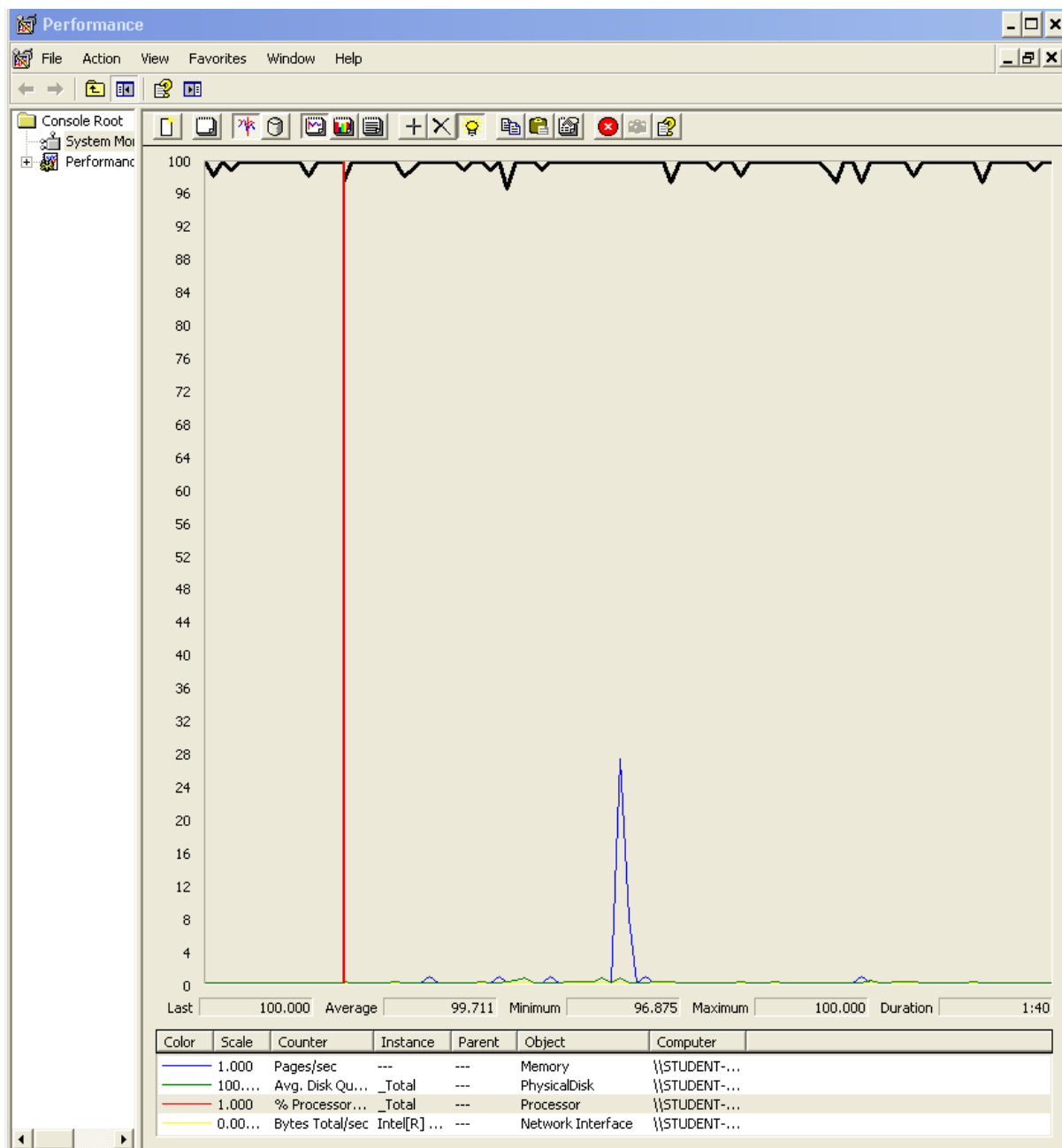
Analysis results:

100 users and 10 loops: the application runs perfectly.

160 users and 10 loops: the application runs perfectly.

170 users and 10 loops: the application begins to have errors, the computer performance analysis shows it could be a processors bottleneck problem.

Conclusion

After the analysis of all the test realized, we can say that for 100 users and 10 loops all of our tests were successful, without any errors or excessive answer time.

It seems that from 150 users the system could encounter some errors due to the processor or memory (in most cases was the processor), either because the answer time was more than 3 seconds or because there wasn't a success answer from the website.

We believe that with 140 users the system will answer correctly without errors or excessive answers times that could affect the user experience.

Changing the processor for a better one could mean an improvement in the number of concurrent users and after this change maybe a memory upgrade would be the way to go to continue increasing the allowed users.