

Diseño y Pruebas

Informe jMeter – D12: Item 6.

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Introducción

En las próximas páginas se mostrará un análisis de las pruebas realizadas con la herramienta jMeter sobre nuestro proyecto.

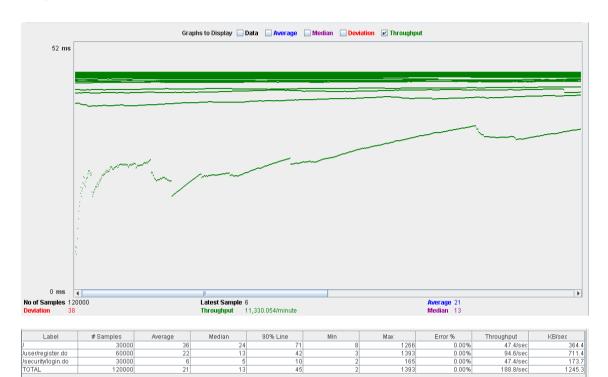
Se destacará cual es el máximo rendimiento del sistema y se mostrarán capturas que lo confirmen.

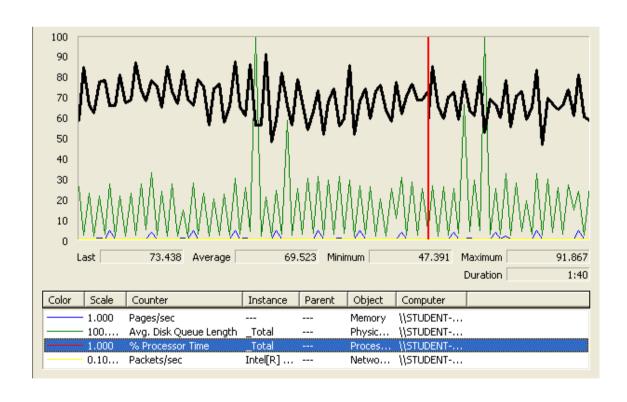
Análisis máximo rendimiento

Mediante el uso de jMeter hemos obtenido un script para cada caso de uso. Para cada uno de ellos se han realizado pruebas primero comenzando con 10,20,50,100,150 y 200 usuarios. Al usar una carga de 200 usuarios ya comenzaba a dar fallos en la mayoría de casos de uso, así que al final quedamos en hacer los casos de uso con 150 usuarios y 200 repeticiones.

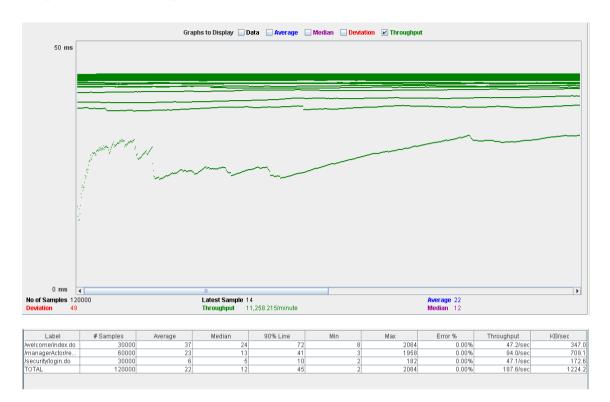
Todos los test tendrán los resultados en forma de grafo, con números y además de una imagen del rendimiento, destacando el cuello de botella.

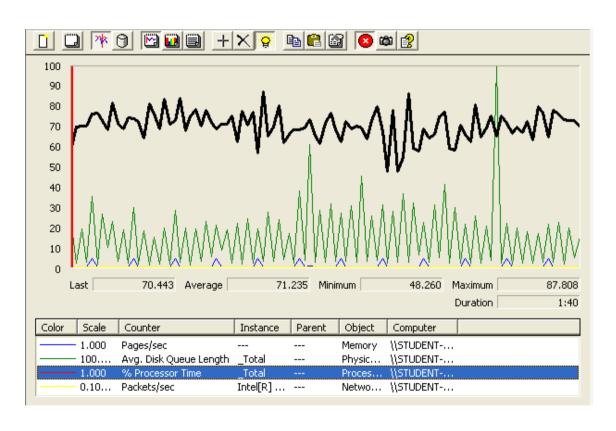
Register as user





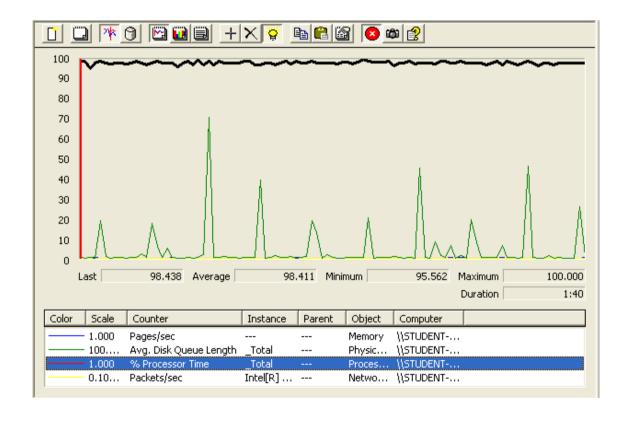
Register as manager





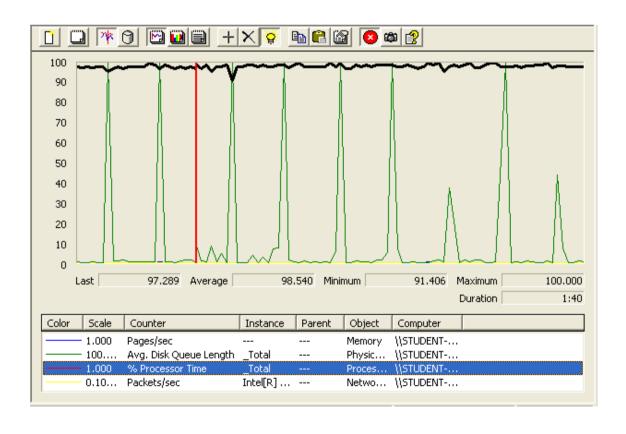
Browse Restaurants





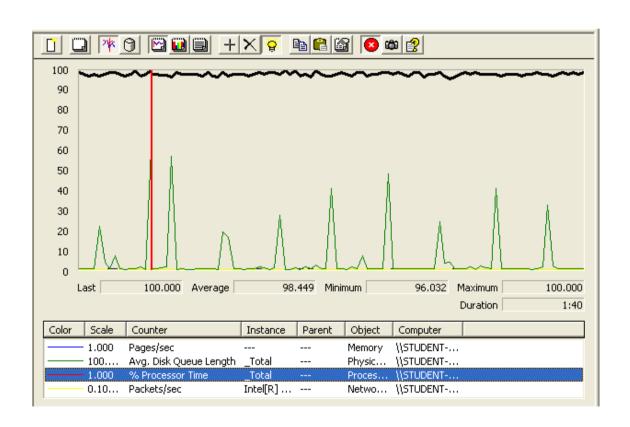
Search Restaurant



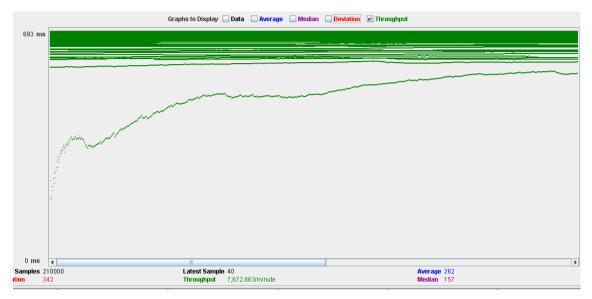


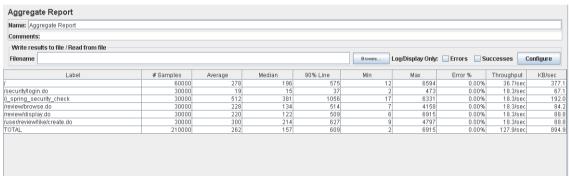
Browse Reviews

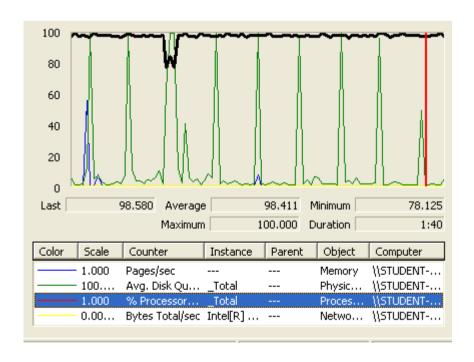




Like a Review

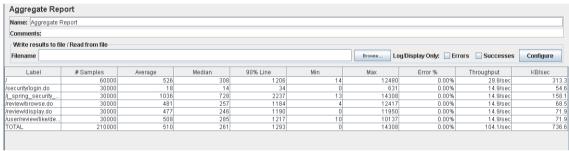


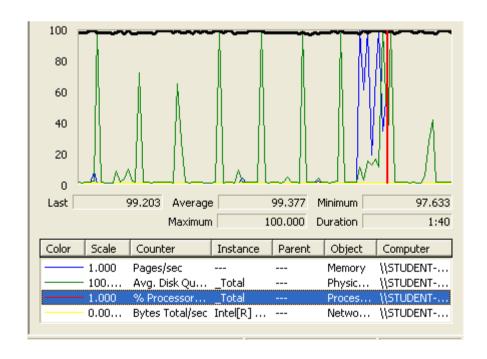




Unlike a Review

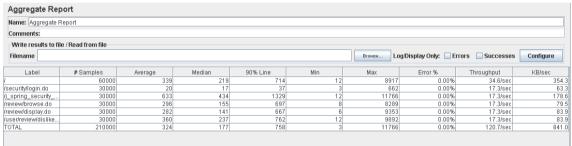


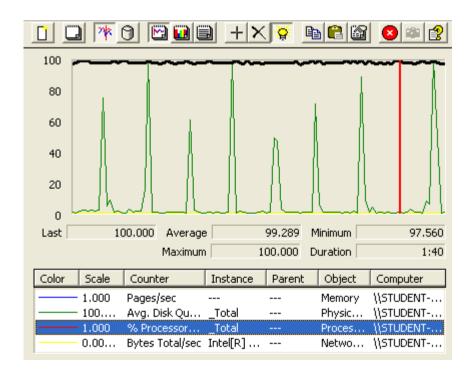




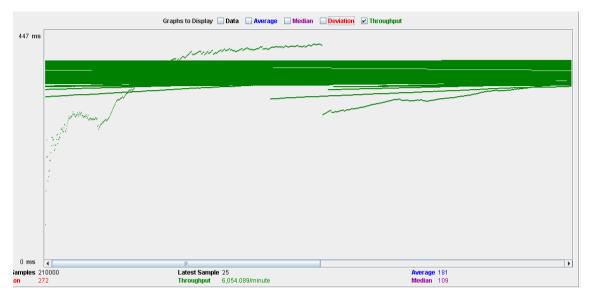
Dislike a Review

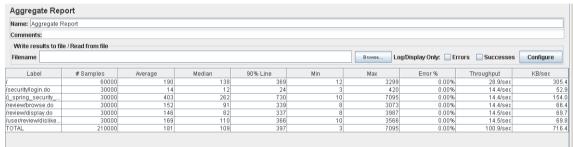


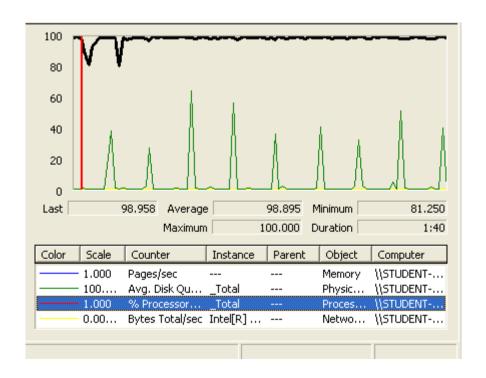




Un-dislike a review

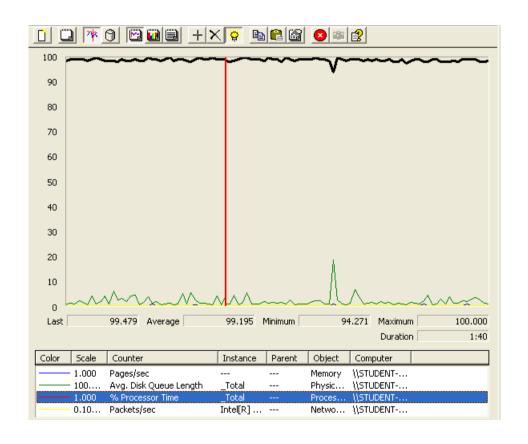




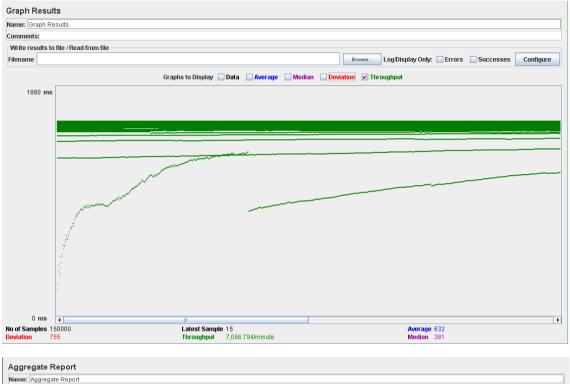


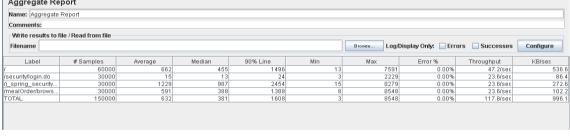
List invoices

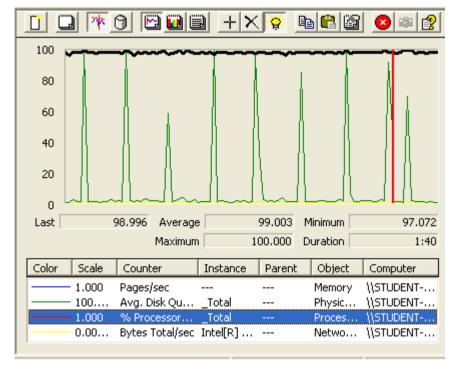




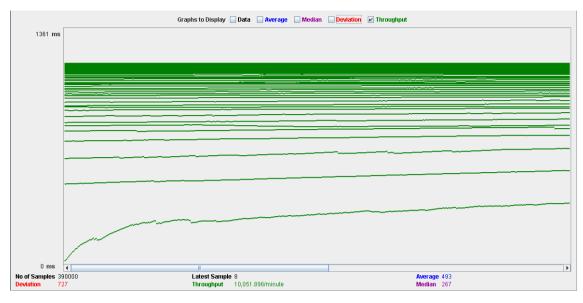
List orders



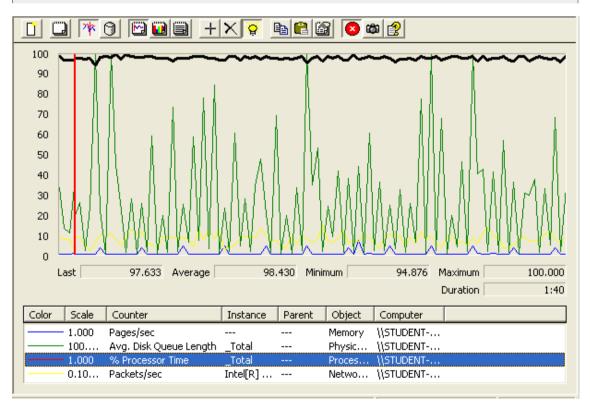




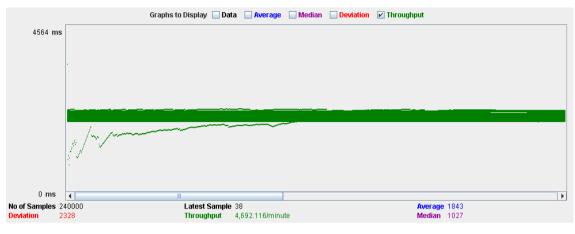
Make order



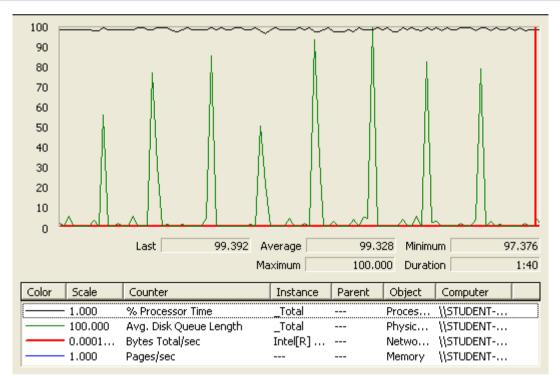
Label	#Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
/welcome/index.do	30000	569	352	1252	9	19013	0.00%	12.9/sec	119.4
/security/login.do	30000	14	11	22	2	1306	0.00%	12.9/sec	47.3
/j_spring_security	30000	1030	740	2115	15	20029	0.00%	12.9/sec	131.9
I	30000	532	326	1181	12	14764	0.00%	12.9/sec	128.3
/restaurant/browse	30000	456	236	1110	5	18381	0.00%	12.9/sec	81.8
/restaurant/display	30000	532	324	1184	9	17601	0.00%	12.9/sec	86.4
/user/mealOrder/m	60000	468	257	1101	8	18133	0.00%	25.9/sec	129.8
/user/quantity/add.do	30000	434	218	1093	4	19004	0.00%	13.0/sec	56.1
/user/quantity/edit.do	30000	516	305	1171	13	15910	0.00%	13.0/sec	56.8
/user/mealOrder/e	60000	468	261	1126	3	17328	0.00%	26.0/sec	133.8
/invoice/display.do	30000	459	246	1127	4	19295	0.00%	13.0/sec	51.3
TOTAL	390000	493	267	1196	2	20029	0.00%	167.5/sec	1018.4



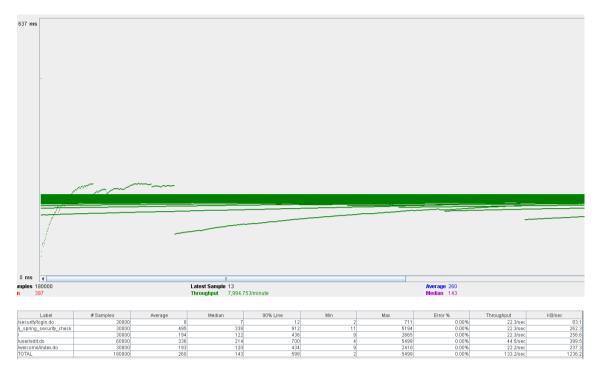
Delete order

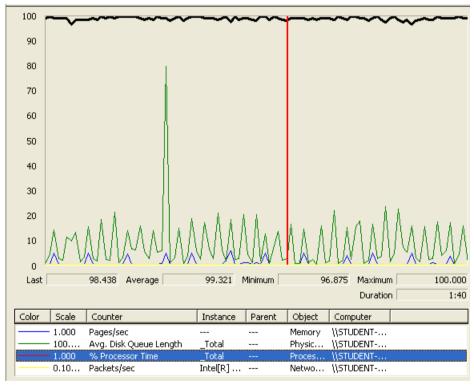


Label	#Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
/security/login.do	30000	29	25	45	3	1244	0.00%	9.8/sec	36.5
/j_spring_secur	30000	3754	2987	7777	38	27003	0.00%	9.8/sec	91.7
I	30000	1834	1121	4484	21	20651	0.00%	9.8/sec	88.5
/restaurant/bro	30000	1715	998	4325	9	24997	0.00%	9.8/sec	61.8
/restaurant/disp	60000	1962	1263	4681	20	33087	0.00%	19.6/sec	136.0
/user/mealOrde	30000	1750	1021	4368	11	25836	0.00%	9.8/sec	53.3
/user/mealOrde	30000	1741	1033	4399	7	36041	0.00%	9.8/sec	100.6
TOTAL	240000	1843	1027	4808	3	36041	0.00%	78.2/sec	568.3



Edit user profile

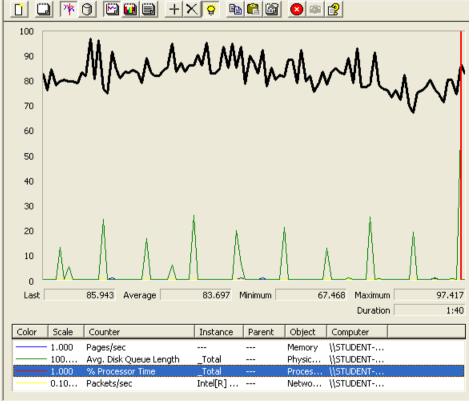




Report a comment as user

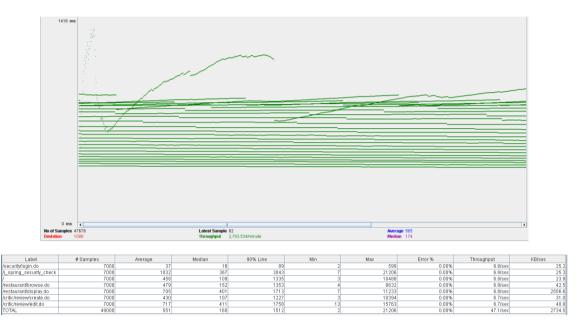
Para realizar el test de "Report a Comment as User" hemos tenido que realizarlo con 100 usuarios y 70 loops, con 150-200 funcionaba correctamente, pero al realizar bastantes reports la máquina empezaba a ralentizarse llegando a bloquearse.

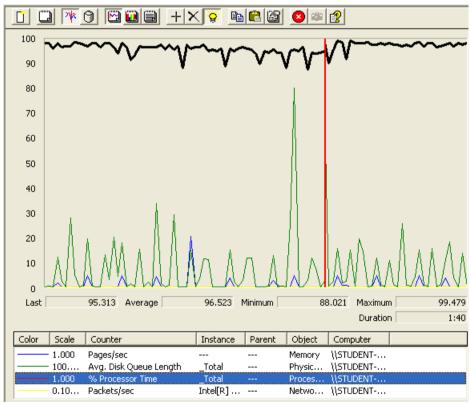




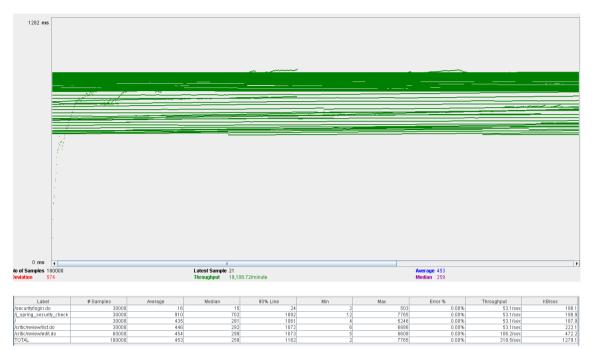
Create Review

Para realizar el test de "Create Review" hemos tenido que realizarlo con 100 usuarios y 70 loops, con 150-200 funcionaba correctamente, pero al realizar bastantes "Reviews" la máquina empezaba a ralentizarse llegando a bloquearse.



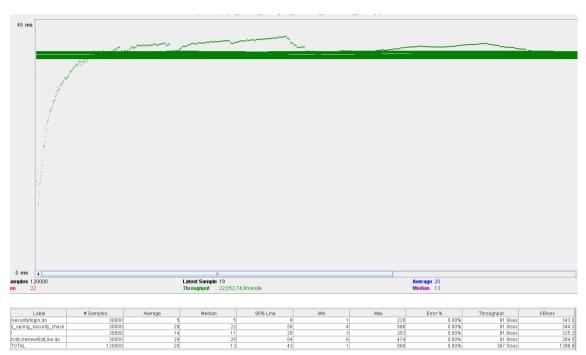


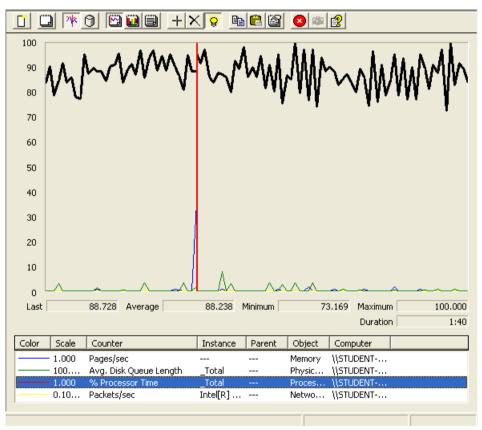
List and edit a review





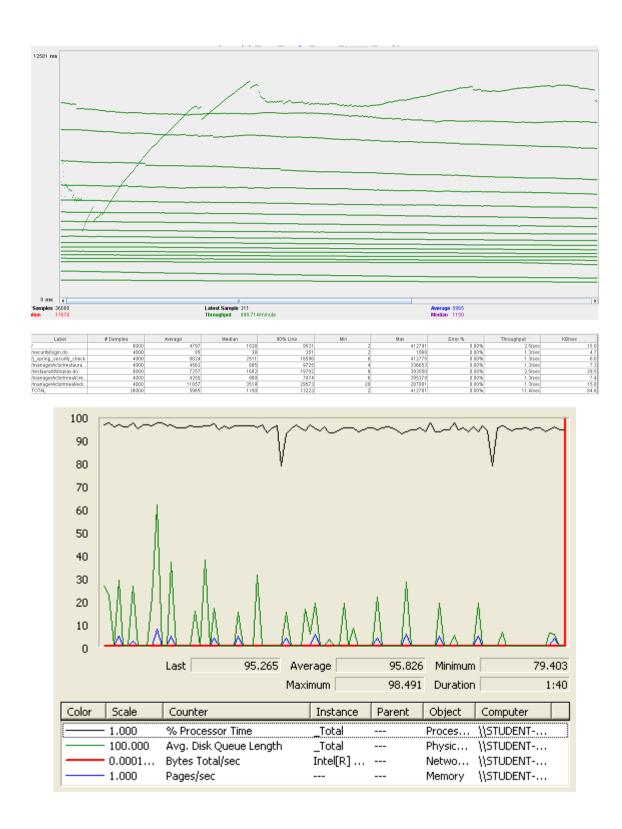
List reviews by likes



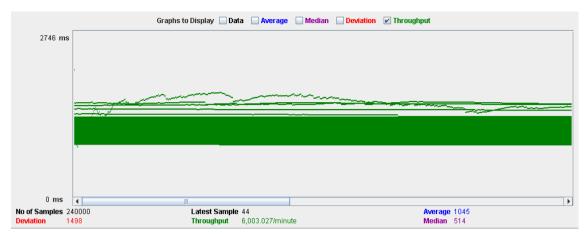


Create meal

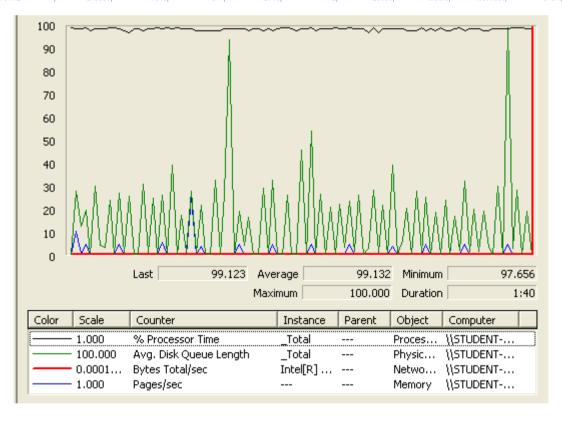
Para realizar el test de "Create Meal" hemos tenido que realizarlo con 80 usuarios y 50 loops. Esto es debido a que para realizar "Create Meal" debemos de hacer un listado de todas la Meals, cuando llevan un gran número creado se bloquea la máquina.



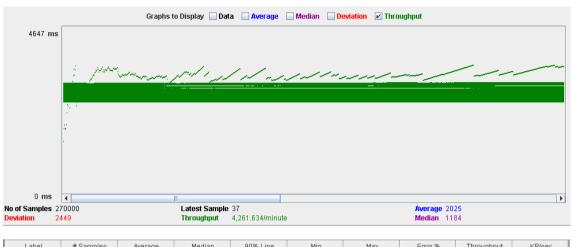
List and edit meal



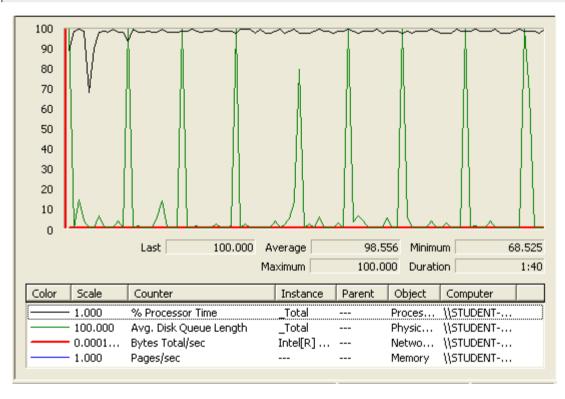
Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
/security/login.do	30000	17	14	33	2	381	0.00%	12.5/sec	46.7
/j_spring_secur	30000	1816	1129	4337	8	23883	0.00%	12.5/sec	58.5
I	30000	924	488	2342	4	16195	0.00%	12.5/sec	55.9
/managerActor/r	30000	923	493	2348	6	20189	0.00%	12.5/sec	71.2
/restaurant/disp	60000	925	481	2307	12	17396	0.00%	25.0/sec	225.4
/managerActor/	60000	1416	821	3446	10	21723	0.00%	25.0/sec	188.8
TOTAL	240000	1045	514	2749	2	23883	0.00%	100.1/sec	646.4



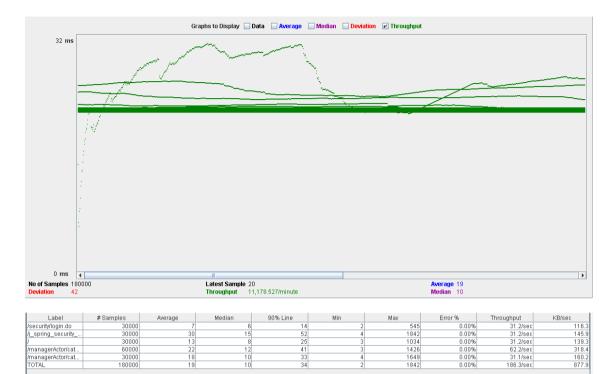
Disable and enable meal

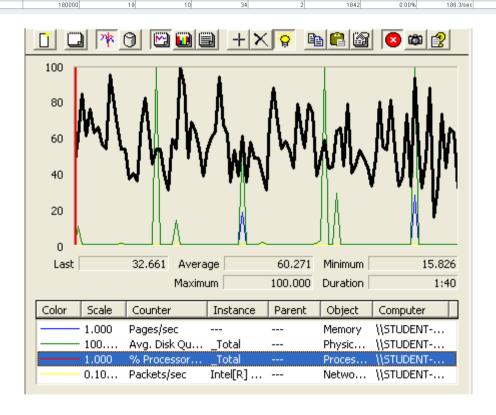


Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
/security/login.do	30000	31	26	50	3	2430	0.00%	7.9/sec	29.5
/j_spring_secur	30000	3514	2722	7531	23	31651	0.00%	7.9/sec	36.9
J	30000	1826	1123	4534	7	21685	0.00%	7.9/sec	35.3
/managerActor/r	30000	1851	1135	4542	8	23172	0.00%	7.9/sec	45.0
/restaurant/disp	90000	1845	1145	4501	15	27315	0.00%	23.7/sec	213.6
/managerActor/	60000	2734	1916	6376	16	31263	0.00%	15.8/sec	183.6
TOTAL	270000	2025	1184	5185	3	31651	0.00%	71.0/sec	543.7



Create category

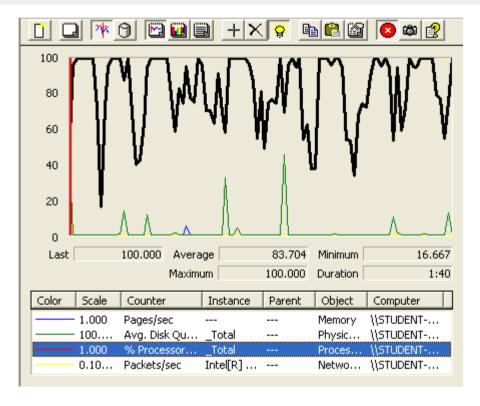




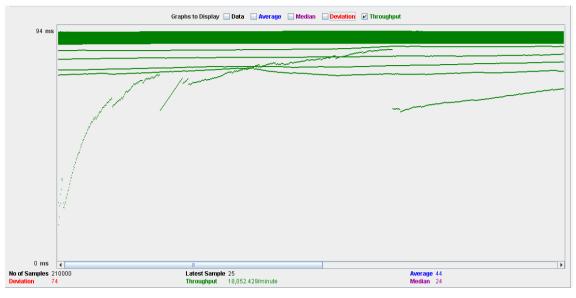
Delete category



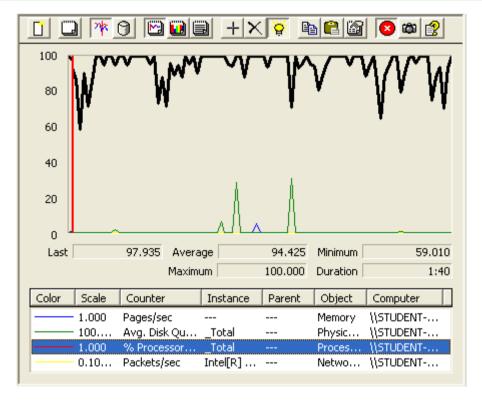
Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
/security/login.do	30000	10	7	15	2	969	0.00%	43.8/sec	163.5
/j_spring_security	30000	70	40	151	5	1932	0.00%	43.8/sec	205.1
1	30000	32	18	66	3	1494	0.00%	43.8/sec	195.8
/managerActor/cat	60000	37	23	76	4	1743	0.00%	87.4/sec	438.9
/managerActor/cat	30000	29	17	57	4	1783	0.00%	43.8/sec	552.2
/managerActor/cat	30000	36	18	77	3	1668	0.00%	43.8/sec	549.6
TOTAL	210000	36	18	77	2	1932	0.00%	305.8/sec	2101.1



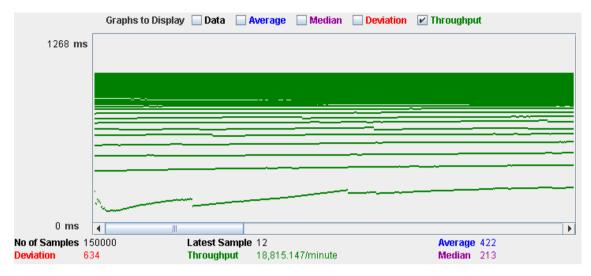
List and edit category



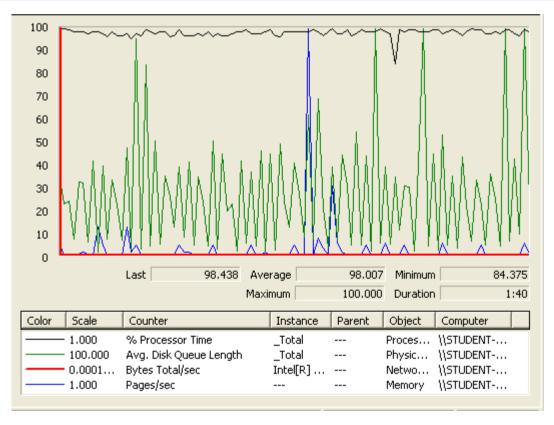
Label	#Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
/security/login.do	30000	10	8	17	2	1275	0.00%	43.1/sec	160.9
/j_spring_security_c	30000	82	50	172	4	2491	0.00%	43.1/sec	201.8
Į.	30000	40	22	83	3	2116	0.00%	43.1/sec	192.6
/managerActor/categ	60000	43	27	84	4	1926	0.00%	86.0/sec	442.6
/managerActor/categ	30000	37	21	73	4	2321	0.00%	43.1/sec	224.9
/managerActor/categ	30000	54	36	106	6	2276	0.00%	43.1/sec	229.0
TOTAL	210000	44	24	93	2	2491	0.00%	300.9/sec	1449.4



Create restaurant



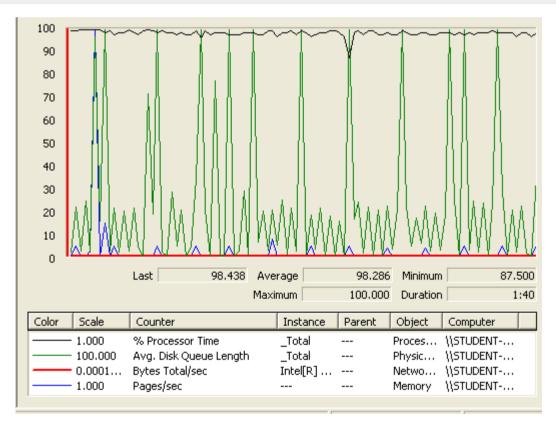
Label	#Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
/security/lo	30000	34	19	44	2	4149	0.00%	62.7/sec	234.1
/j_spring	30000	773	519	1713	8	12078	0.00%	62.7/sec	293.3
f .	30000	412	258	981	3	10539	0.00%	62.8/sec	280.5
/managerA	30000	413	251	978	4	9991	0.00%	62.8/sec	424.9
/managerA	30000	476	314	1030	12	11887	0.00%	62.8/sec	436.7
TOTAL	150000	422	213	1060	2	12078	0.00%	313.6/sec	1667.7



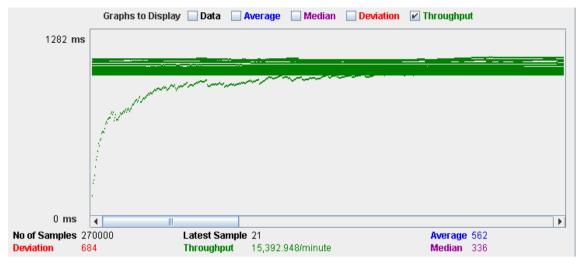
List and edit restaurant



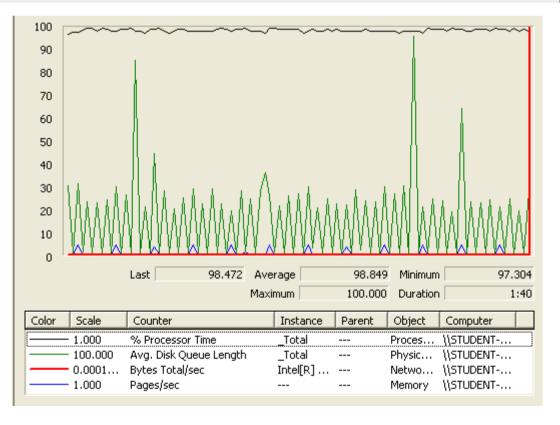
Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
I	60000	548	357	1301	4	8250	0.00%	75.4/sec	523.6
/security/login.do	30000	17	17	27	2	139	0.00%	37.7/sec	137.9
/j_spring_securi	30000	1041	814	2200	10	9224	0.00%	37.7/sec	176.2
/managerActor/r	30000	535	337	1306	6	8138	0.00%	37.7/sec	248.1
/managerActor/r	60000	540	349	1296	6	9738	0.00%	75.4/sec	548.7
TOTAL	210000	539	316	1387	2	9738	0.00%	263.8/sec	1634.3



Disable and enable restaurant

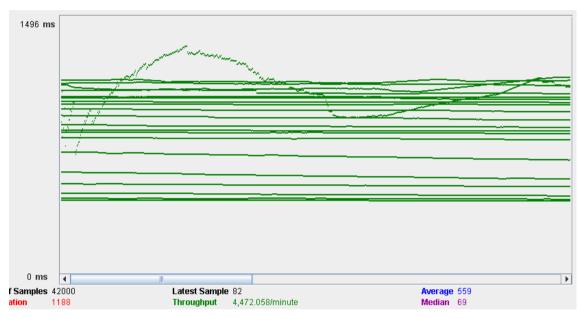


#Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
60000	571	368	1370	4	7511	0.00%	57.0/sec	379.6
30000	16	16	25	2	530	0.00%	28.5/sec	104.3
30000	1097	872	2310	12	8195	0.00%	28.5/sec	133.3
30000	555	349	1358	5	6663	0.00%	28.5/sec	187.7
120000	562	358	1360	6	7727	0.00%	114.0/sec	821.4
270000	562	336	1435	2	8195	0.00%	256.5/sec	1626.2
	60000 30000 30000 30000 120000	60000 571 30000 16 30000 1097 30000 555 120000 562	60000 571 368 30000 16 16 30000 1097 872 30000 555 349 120000 562 358	60000 571 368 1370 30000 16 16 25 30000 1097 872 2310 30000 555 349 1358 120000 562 358 1360	60000 571 368 1370 4 30000 16 16 25 2 30000 1097 872 2310 12 30000 555 349 1358 5 120000 562 358 1360 6	60000 571 368 1370 4 7511 30000 16 16 25 2 530 30000 1097 872 2310 12 8195 30000 555 349 1358 5 6663 120000 562 358 1360 6 7727	60000 571 368 1370 4 7511 0.00% 30000 16 16 25 2 530 0.00% 30000 1097 872 2310 12 8195 0.00% 30000 555 349 1358 5 6663 0.00% 120000 562 358 1360 6 7727 0.00%	60000 571 368 1370 4 7511 0.00% 57.0/sec 30000 16 16 25 2 530 0.00% 28.5/sec 30000 1097 872 2310 12 8195 0.00% 28.5/sec 30000 555 349 1358 5 6663 0.00% 28.5/sec 120000 562 358 1360 6 7727 0.00% 114.0/sec

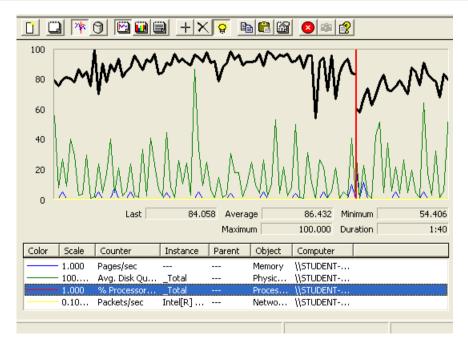


Create Social Identity

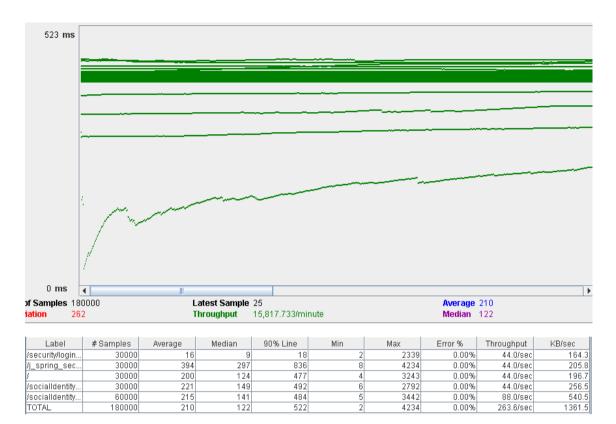
Para realizar el test de "Create Social Identity" hemos tenido que realizarlo con 70 usuarios y 100 loops. Esto es debido a que para realizar "Create Social Identity" debemos de hacer un listado de todas la Social Identity, cuando llevan un gran número creado se bloquea la máquina

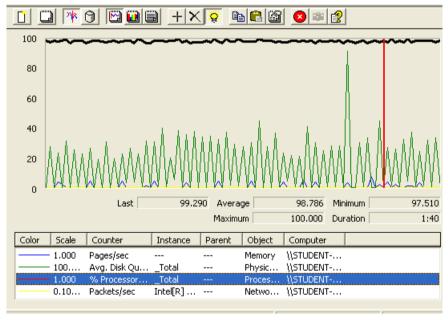


Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
/security/login	7000	115	14	438	2	983	0.00%	12.4/sec	46.5
/j_spring_sec	7000	911	132	3051	6	24608	0.00%	12.4/sec	58.2
j .	7000	448	39	1403	3	11742	0.00%	12.4/sec	55.6
/managerAct	7000	469	48	1480	4	11334	0.00%	12.4/sec	76.6
/socialIdentity	7000	546	62	1627	3	15344	0.00%	12.4/sec	71.2
/socialIdentity	7000	866	277	2379	12	12684	0.00%	12.4/sec	107.5
TOTAL	42000	559	69	1643	2	24608	0.00%	74.5/sec	414.7

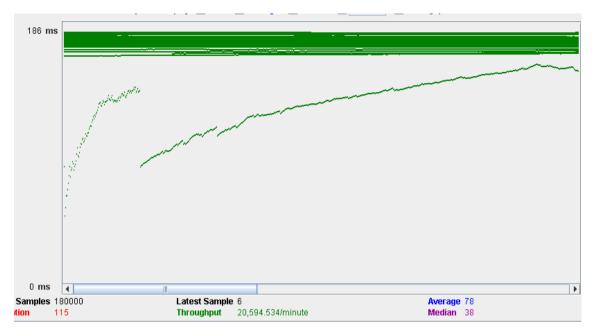


Edit Social Identity

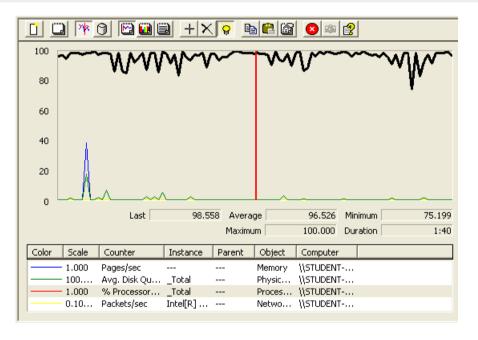




Delete Social Identity

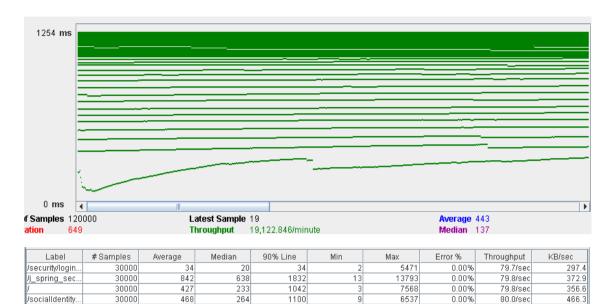


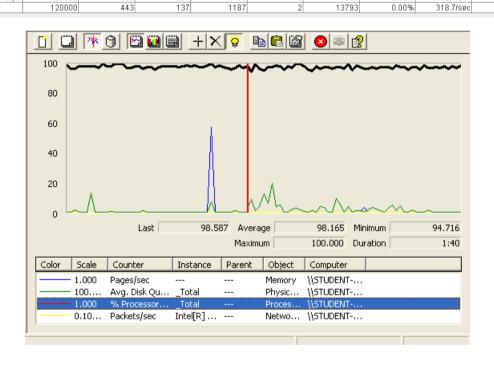
Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
/security/login	30000	11	9	17	2	658	0.00%	57.3/sec	214.0
/j_spring_sec	30000	148	90	336	6	2119	0.00%	57.3/sec	268.0
J	30000	71	34	174	3	1521	0.00%	57.3/sec	256.2
/socialIdentity	30000	91	59	196	5	1750	0.00%	57.3/sec	315.1
/socialIdentity	60000	73	35	174	3	1843	0.00%	114.6/sec	1064.6
TOTAL	180000	78	38	191	2	2119	0.00%	343.2/sec	2113.8



List Social Identity

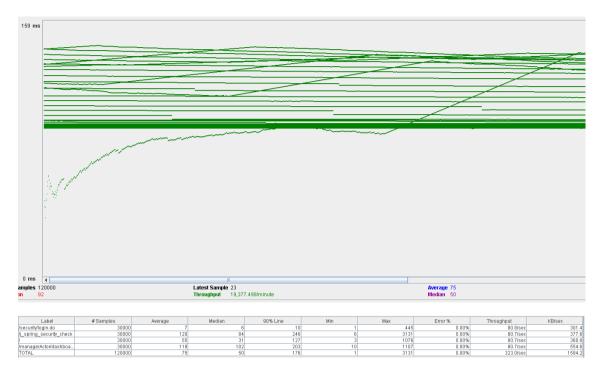
TOTAL





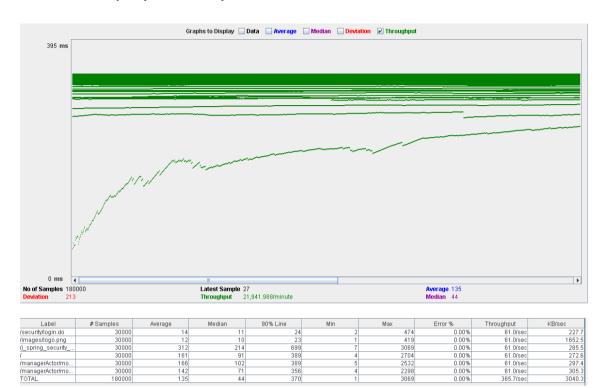
1490.4

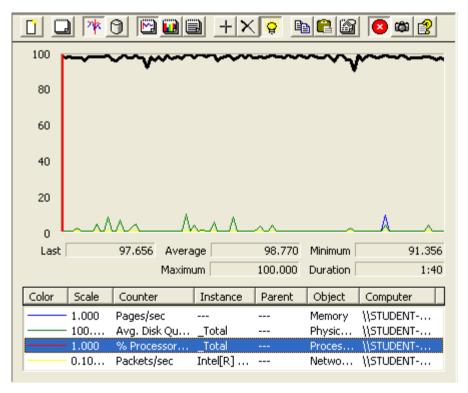
Dashboard



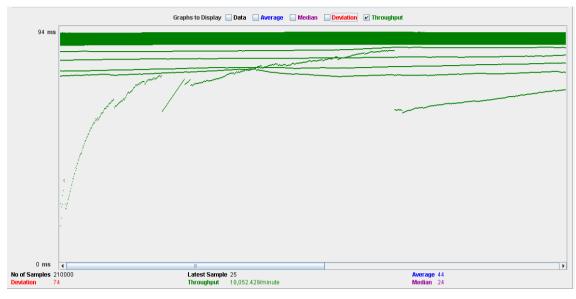


List and display monthlybills

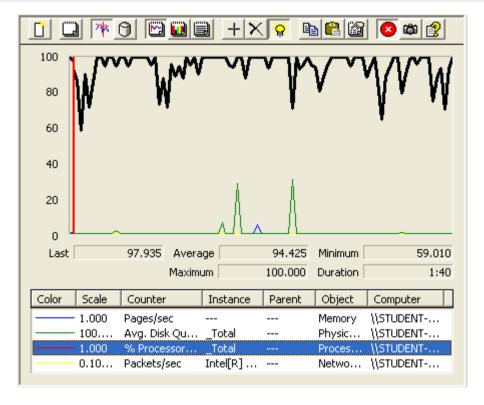




Manage orders

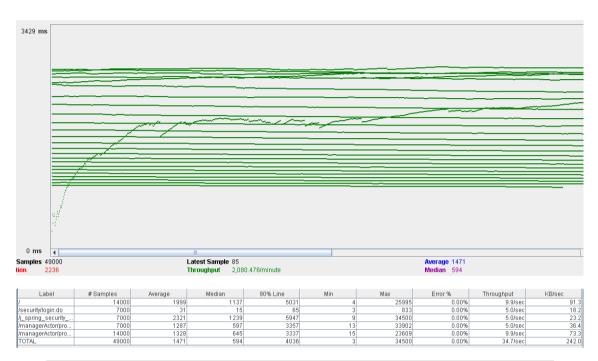


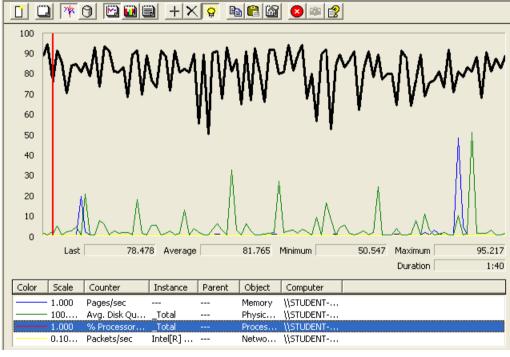
Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
/security/login.do	30000	10	8	17	2	1275	0.00%	43.1/sec	160.9
/j_spring_security_c	30000	82	50	172	4	2491	0.00%	43.1/sec	201.8
Į.	30000	40	22	83	3	2116	0.00%	43.1/sec	192.6
/managerActor/categ	60000	43	27	84	4	1926	0.00%	86.0/sec	442.6
/managerActor/categ	30000	37	21	73	4	2321	0.00%	43.1/sec	224.9
/managerActor/categ	30000	54	36	106	6	2276	0.00%	43.1/sec	229.0
TOTAL	210000	44	24	93	2	2491	0.00%	300.9/sec	1449.4



Promote a restaurant

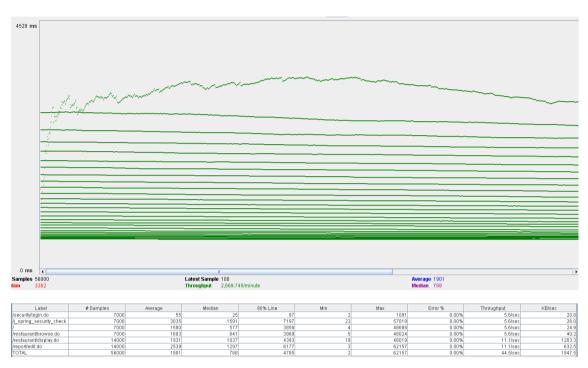
Para realizar el test de "Promote a Restaurant" hemos tenido que realizarlo con 100 usuarios y 70 loops. Esto es debido a que para realizar "Promote a Restaurant" debemos de hacer un listado de todas la Promotes, cuando llevan un gran número creado se bloquea la máquina

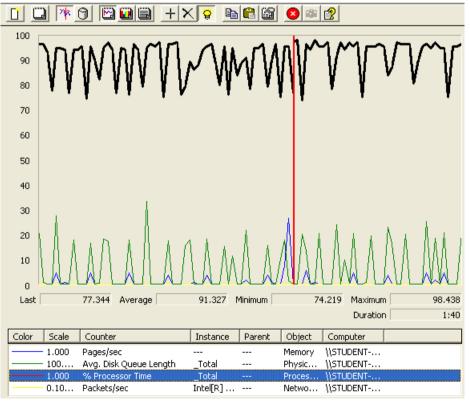




Report comment as manager

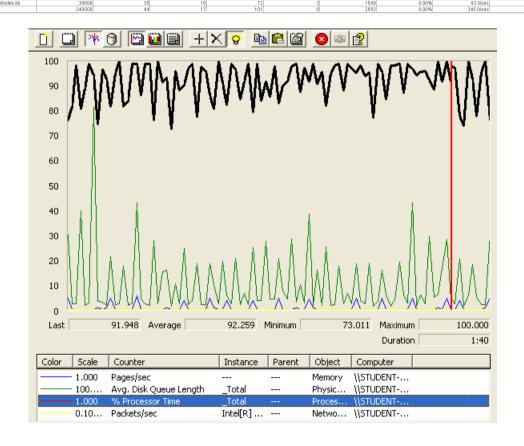
Para realizar el test de "Report a Comment as Manager" hemos tenido que realizarlo con 100 usuarios y 70 loops, con 150-200 funcionaba correctamente, pero al realizar bastantes reports la máquina empezaba a ralentizarse llegando a bloquearse.





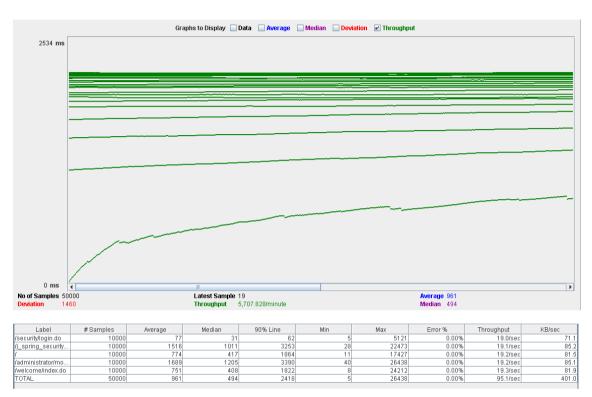
Register a critic

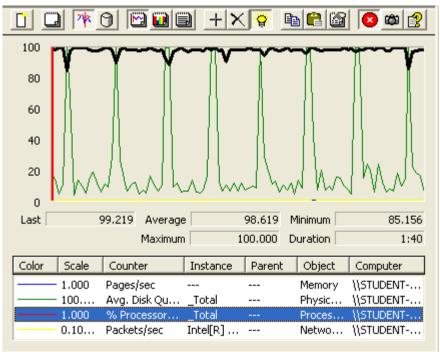




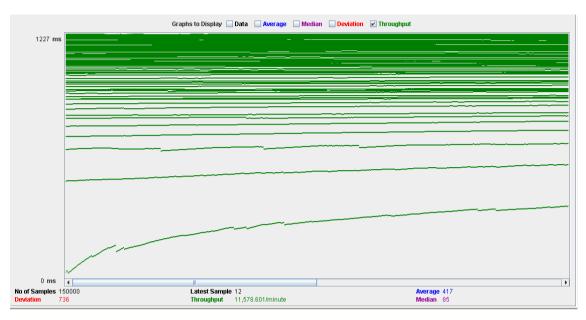
Generate monthly bills

Para realizar el test de "Generate Monthly Bills" hemos tenido que realizarlo con 100 usuarios y 100 loops, con 150-200 funcionaba correctamente, pero al realizar bastantes MontlyBills la máquina empezaba a ralentizarse llegando a bloquearse.

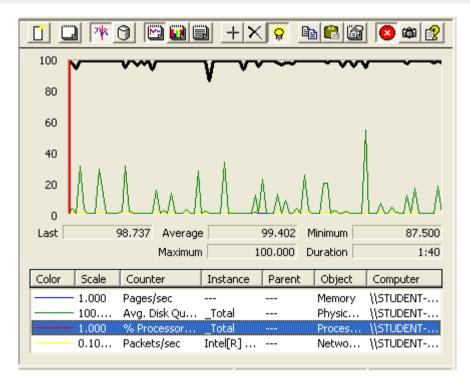




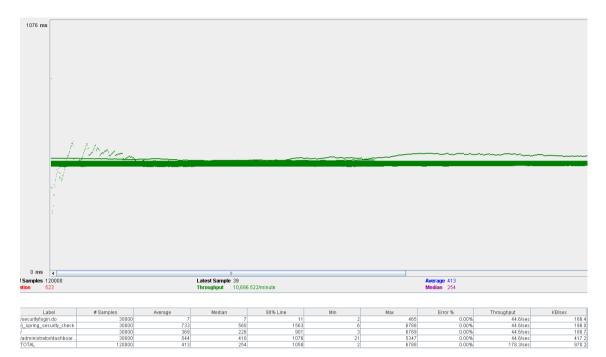
List monthly bills

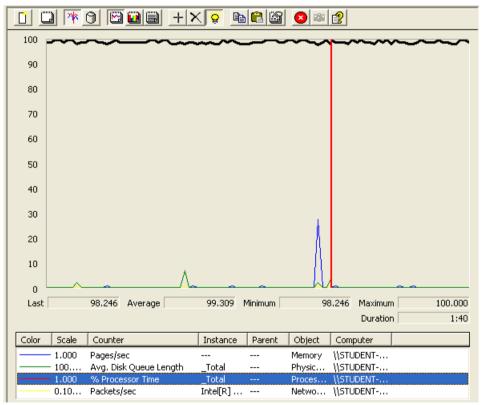


Label	# Samples	Average	Median	90% Line	Min	Max	Error %	Throughput	KB/sec
/security/login.do	30000	48	20	46	3	8790	0.00%	38.6/sec	144.1
/j_spring_security	30000	1013	715	2237	14	13294	0.00%	38.6/sec	171.8
1	30000	490	268	1214	7	10970	0.00%	38.7/sec	164.0
/images/arrow_do	30000	19	15	36	1	719	0.00%	38.7/sec	17.0
/administrator/mo	30000	516	291	1245	11	11507	0.00%	38.7/sec	204.5
TOTAL	150000	417	85	1209	1	13294	0.00%	193.0/sec	700.1

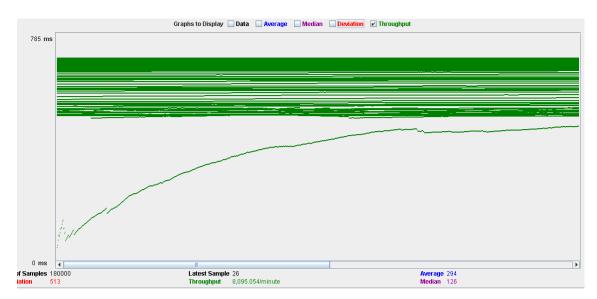


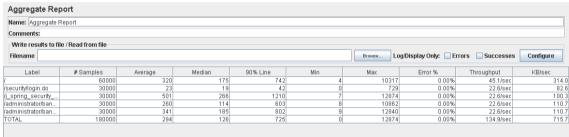
Dashboard

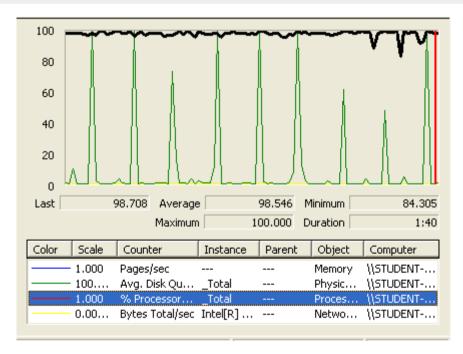




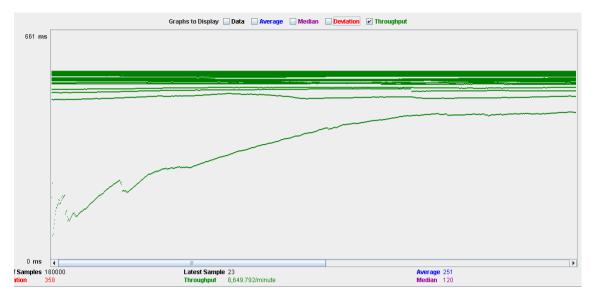
Ban user

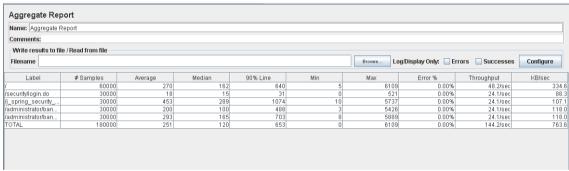


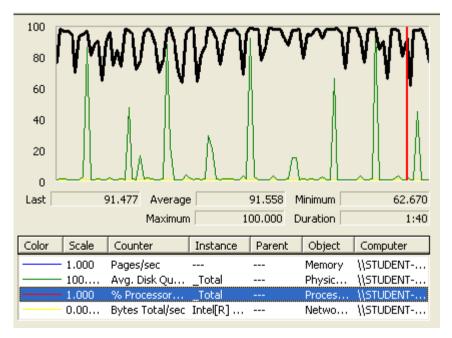




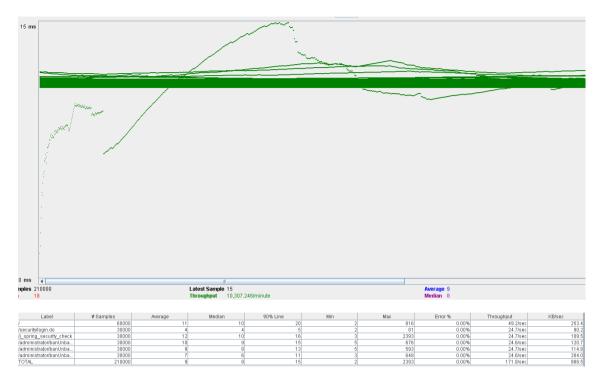
Unban user

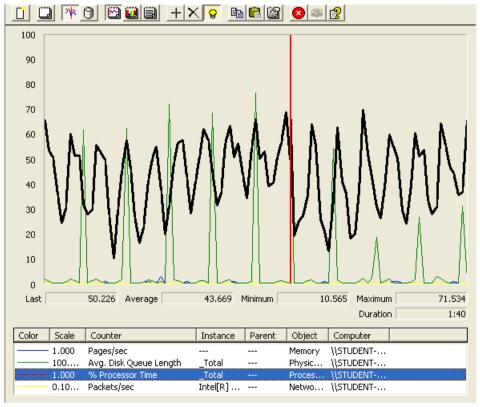




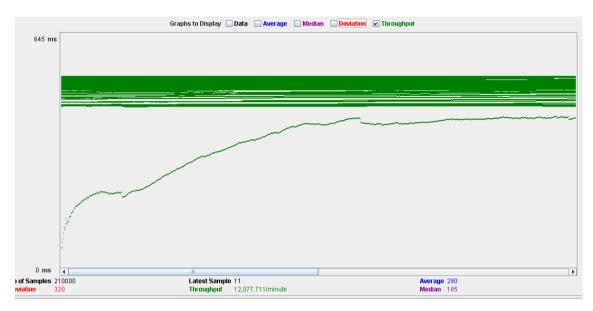


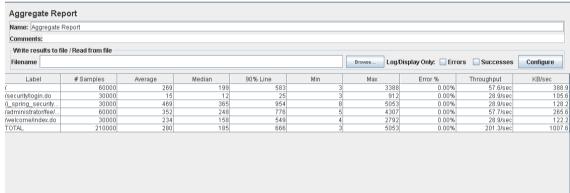
Browse reported users

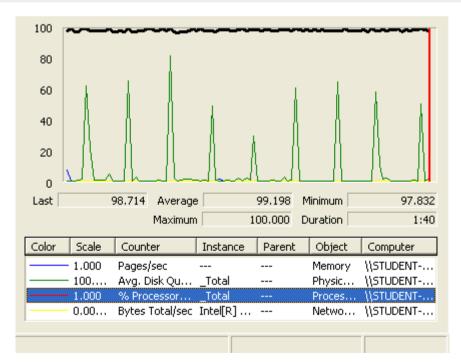




Edit fee

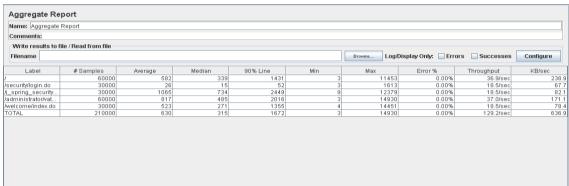


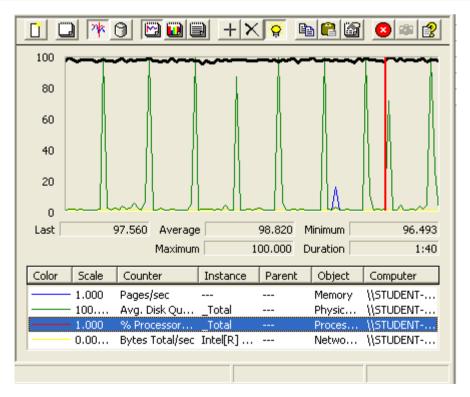




Edit vat number







Conclusiones

Como podemos observar en todos los test al aumentar el número de usuarios más tarda en realizarse cada acción. Además, podemos ver que el procesador es nuestro cuello de botella, si lo reemplazamos por un procesador más potente podríamos aumentar la cantidad de usuarios simultáneos.

Se han encontrado casos de uso que en los cuales hemos tenido que bajar mucho los usuarios y veces que se repetían. Estos casos eran aquellos que creaban una entidad nueva y luego se listaban todas. Al principio no pasaba nada, pero según avanzaba y cada vez mucho más lento llegando a un punto de no avance.