

Performance test of web servlet: by Apache JMeter

num bers of Users (Thre ad)	Test Results for amazon service:	Test in my local host:																																																																		
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Test Results for amazon service:

50 number of Users(Thread):

Summary Report

Name: Summary Report

Comments:

Write results to file / Read from file

Filename Log/Display Only: ☐ Errors ☐ Successes

Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Throughp...	Received ...	Sent KB/sec	Avg. Bytes
HTTP Re...	50	423	322	721	61.37	0.00%	67.8/sec	1151.54	8.08	17381.0
TOTAL	50	423	322	721	61.37	0.00%	67.8/sec	1151.54	8.08	17381.0

100 number of Users(Thread):

Summary Report

Name: Summary Report

Comments:

Write results to file / Read from file

Filename Log/Display Only: ☐ Errors ☐ Successes

Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Throughp...	Received ...	Sent KB/sec	Avg. Bytes
HTTP Re...	100	722	411	1144	200.89	0.00%	84.2/sec	1428.76	10.03	17381.0
TOTAL	100	722	411	1144	200.89	0.00%	84.2/sec	1428.76	10.03	17381.0

200 numbers of Users(Thread):

Summary Report

Name: Summary Report

Comments:

Write results to file / Read from file

Filename

Browse...

Log/Display Only:

☐ Errors

☐ Successes

Configure

Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Throughp...	Received ...	Sent KB/sec	Avg. Bytes
HTTP Re...	200	1620	472	2615	462.82	0.00%	73.9/sec	1254.52	8.81	17381.0
TOTAL	200	1620	472	2615	462.82	0.00%	73.9/sec	1254.52	8.81	17381.0

300 numbers of Users(Thread):

Summary Report

Name: Summary Report

Comments:

Write results to file / Read from file

Filename

Browse...

Log/Display Only:

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Configure

Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Throughp...	Received ...	Sent KB/sec	Avg. Bytes
HTTP Re...	300	2003	615	3963	819.35	0.00%	74.1/sec	1257.93	8.83	17381.0
TOTAL	300	2003	615	3963	819.35	0.00%	74.1/sec	1257.93	8.83	17381.0

500 numbers of Users(Thread):

Summary Report

Name: Summary Report

Comments:

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Filename

Browse...

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Configure

Label	# Samples	Average	Min	Max	Std. Dev.	Error %	Throughp...	Received ...	Sent KB/sec	Avg. Bytes
HTTP Re...	500	10532	1232	21233	4369.74	0.00%	23.3/sec	396.17	2.78	17381.0
TOTAL	500	10532	1232	21233	4369.74	0.00%	23.3/sec	396.17	2.78	17381.0

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HTTP Re...	1000	29500	2728	109698	20841.67	5.00%	9.1/sec	147.91	1.03	16639.8
TOTAL	1000	29500	2728	109698	20841.67	5.00%	9.1/sec	147.91	1.03	16639.8

Amazon Service:

Number of Users(threads)	Average response time(ms)	Throughput(qps)
50	423	67.8
100	722	84.2
200	1620	73.0
300	2003	74.1
500	10532	23.3
1000	29500	9.1

Throughput: Total number of transaction or requests in a given time or TPS (transaction per second), larger is better.

We can see the peak throughput happens around 100 threads, the throughput will be around 85qps(query per second).

When we used 1000 threads, we got the error(the error rates change to 5%), if we test more threads, the error rates will increase ,which means that this memory size is our server's bottleneck.

Test in my local host:

200 numbers of Users(Thread):

Summary Report											
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HTTP Re...	300	198	6	367	91.72	7.33%	639.7/sec	10161.06	68.31	16266.4	
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TOTAL	500	263	7	466	119.73	18.60%	796.2/sec	11315.65	74.68	14553.5

Local Hose:

Number of Users(threads)	Average response time(ms)	Throughput(qps)
200	155	510.2
300	198	639.7
500	263	796.2

We can see in our local host, the throughput performance is better than cloud service. The peak throughput could reach about 600 qps.

However, the error happens when we got 300 numbers of users, which means that this memory size is our localhost server's bottleneck.