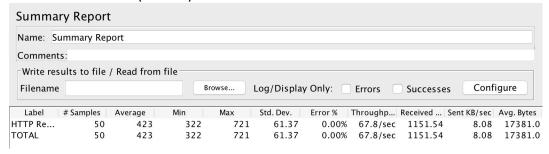
# Performance test of web servlet: by Apache JMeter

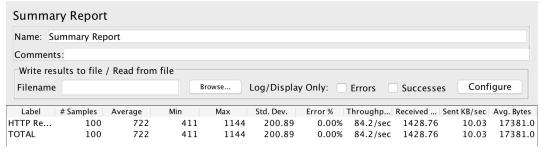
num bers	Test Results for amazon service:	Test in my local host:					
of							
Users							
(Thre							
ad)							
200	Summary Report	Summary Report					
	Name: Summary Report	Name: Summary Report					
	Comments:	Comments: Write results to file / Read from file					
	Write results to file / Read from file						
	Filename Browse Log/Display Only: Errors Successes Configure	Filename Browse Log/Display Only: Errors Successes Configure					
	Label         # Samples         Average         Min         Max         Sid. Dev.         Error %         Throughp         Received         Sent R8/sec         Avg. Bytes           TOTAL         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	Label         # Samples         Average         Min         Max         Std. Dev.         Error N:         Throughp Received Sent R8:eze         Serv. R9:eze         Ayr. Phrs           HTDF Re         200         155         4         258         67.37         0.00%         510.2/psec         6859.52         58.79         17380.0           TOTAL         200         155         4         258         67.37         0.00%         510.2/psec         6859.52         58.79         17380.0           TOTAL         200         155         4         258         67.37         0.00%         510.2/psec         6859.52         58.79         17380.0					
300	Summary Report	Summary Report					
	Name: Summary Report	Name: Summary Report					
	Comments:	Comments:					
	Write results to file / Read from file	Write results to file / Read from file					
	Filename Browse Log/Display Only: Errors Successes Configure	Filename Browse Log/Display Only: Errors Successes Configure					
	Label         # Samples         Average         Mn         Max         Sid. Dev.         Error %         Throughp Received Sent R8Jssc. Avg. Bytes           HTTP Re         300         2003         615         3963         819.35         0.00%         74.1/sec         1257.93         8.83         17381.0           OTAL         300         2003         615         3963         819.35         0.00%         74.1/sec         1257.93         8.83         17381.0	Label         # Samples         Average         Mn         Max         \$\$M. Dev.         Error %         Throughp.         Received         Sert \$\$M\$/set.         Avg. Bytes           HTP Re         300         198         6         367         91.72         7.33%         639.7/sec         1016.10         6         83.1         16266.4           TOTAL         300         198         6         367         91.72         7.33%         639.7/sec         1016.10         6         83.1         16266.4					
500	Summary Report	Summary Report					
	Name: Summary Report	Name: Summary Report					
	Comments:	Comments:					
	Write results to file / Read from file	Write results to file / Read from file					
	Filename Browse Log/Display Only: Errors Successes Configure	Filename Browse Log/Display Only: Errors Successes Configure					
	Label #Samples Average Min Max Std. Dev. Error % Throughp Received Sent KB/sec Avg. Bytes	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	HTTP Re 500 263 7 466 119.73 18.60% 796.2/sec 11315.65 74.68 14553.5 TOTAL 500 263 7 466 119.73 18.60% 796.2/sec 11315.65 74.68 14553.5					
1000	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         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						

### Test Results for amazon service:

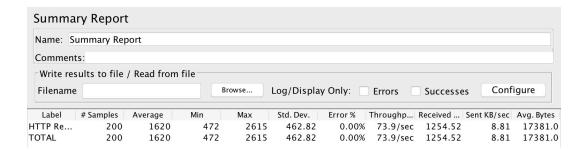
50 number of Users(Thread):



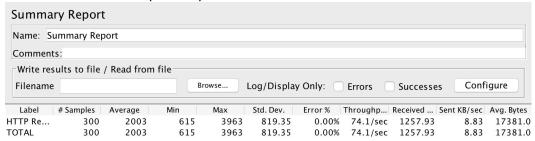
### 100 number of Users(Thread):



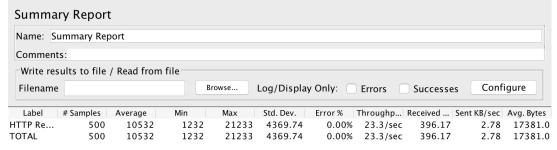
200 numbers of Users(Thread):



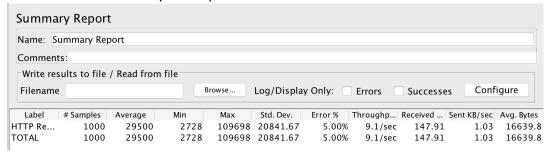
### 300 numbers of Users(Thread):



# 500 numbers of Users(Thread):



#### 1000 numbers of Users(Thread):



#### 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:

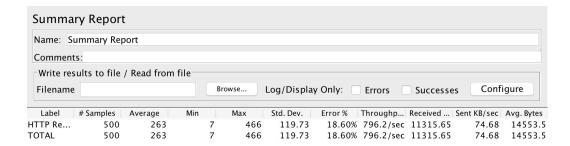
200 numbers of Users(Thread):

s:	/ D   f									
ults to file	D   f									
uits to file /	Read from	file —								
			Br	owse	Log/Display	y Only:	Errors	Successe	s Conf	igure
					6.1.5	- o/				
	3	Min								
					2000-000					1738 1738
	# Samples   200	# Samples   Average   200 155	# Samples   Average   Min 200 155	# Samples   Average   Min 200 155 4	# Samples   Average   Min   Max   200   155   4   258	# Samples   Average   Min   Max   Std. Dev.   200   155   4   258   67.37	# Samples   Average   Min   Max   Std. Dev.   Error %   200   155   4   258   67.37   0.00%	# Samples   Average   Min   Max   Std. Dev.   Error%   Throughp   200   155   4   258   67.37   0.00%   510.2/sec	# Samples   Average   Min   Max   Std. Dev.   Error %   Throughp   Received   200   155   4   258   67.37   0.00%   510.2/sec   8659.52	# Samples   Average   Min   Max   Std. Dev.   Error

# 300 numbers of Users(Thread):

Summa	ry Report										
Name: Su	ummary Rep	ort									
Comment	s:										
-Write res	ults to file	/ Read from	file								
Filename				Br	owse	Log/Display	Only:	Errors	Successe	s Conf	igure
Label	# Samples	Average	Min		Max	Std. Dev.	Error %	Throughp	Received	Sent KB/sec	Avg. Bytes
HTTP Re	300	198		6	367	91.72	7.33%	639.7/sec	10161.06	68.31	16266.4
TOTAL	300	198		6	367	91.72	7.33%	639.7/sec	10161.06	68.31	16266.4

500 numbers of Users(Thread):



#### 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.