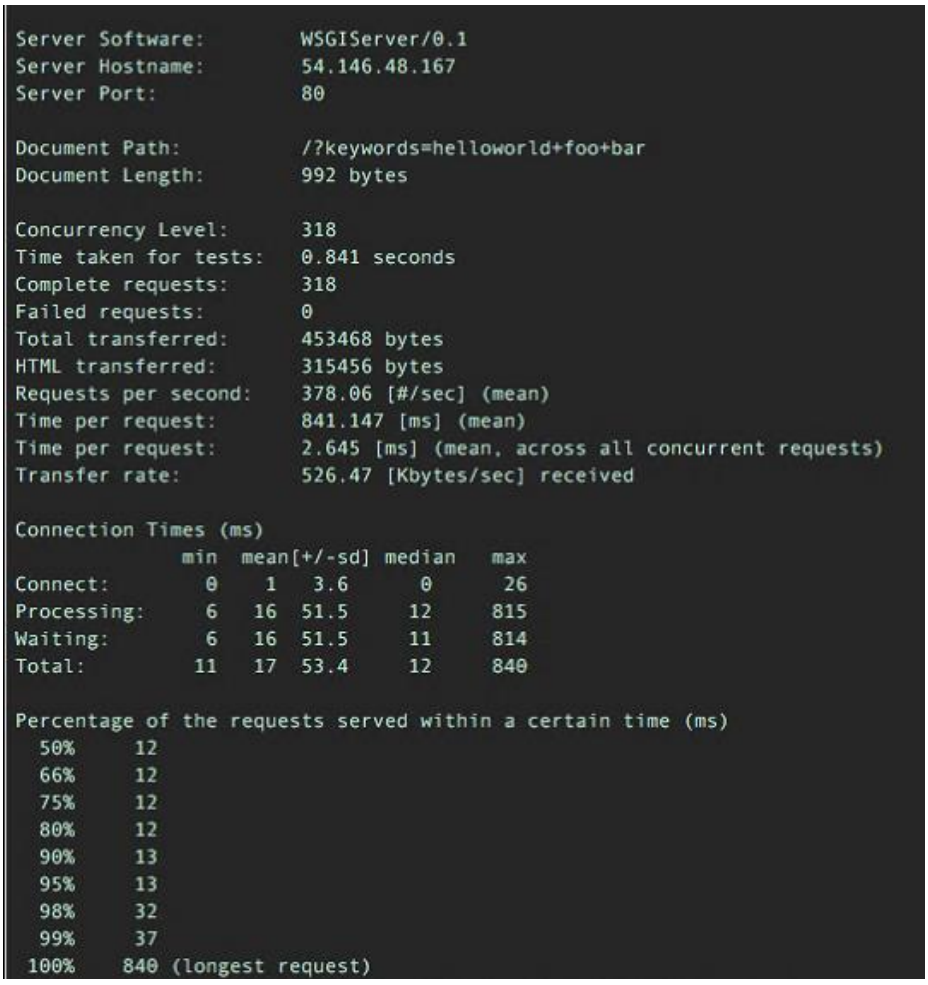
Results from Apache Benchmark

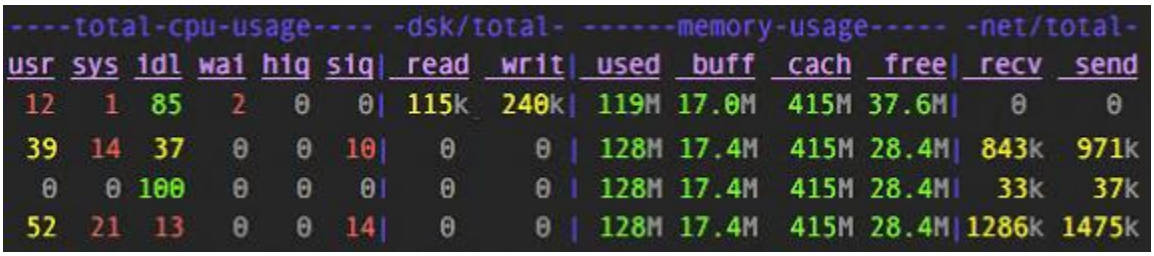
Test Case	Description	Results
Max Connections before drop	318 Requests, 318 Concurrent	318 Requests
Requests per second	318 Requests, 318 Concurrent	378.06 Requests/second
Latency per request	318 Requests, 318 Concurrent	37ms for 99% of Requests



```
Server Software:        WSGIServer/0.1
Server Hostname:        54.146.48.167
Server Port:            80

Document Path:          /?keywords=helloworld+foo+bar
Document Length:        992 bytes

Concurrency Level:      318
Time taken for tests:   0.841 seconds
Complete requests:      318
Failed requests:        0
Total transferred:      453468 bytes
HTML transferred:       315456 bytes
Requests per second:    378.06 [#/sec] (mean)
Time per request:       841.147 [ms] (mean)
Time per request:       2.645 [ms] (mean, across all concurrent requests)
Transfer rate:          526.47 [Kbytes/sec] received

Connection Times (ms)
              min  mean[+/-sd] median   max
Connect:        0    1   3.6      0      26
Processing:     6   16  51.5     12     815
Waiting:        6   16  51.5     11     814
Total:         11   17  53.4     12     840

Percentage of the requests served within a certain time (ms)
  50%     12
  66%     12
  75%     12
  80%     12
  90%     13
  95%     13
  98%     32
  99%     37
 100%    840 (longest request)
```

Figure: Apache Benchmarking tool for 318 concurrent requests

System Benchmarking (using dstat, 1000 requests, 318 concurrent, sent from remote EC2 instance)



----total-cpu-usage----						-dsk/total-		------memory-usage-----				-net/total-	
usr	sys	idl	wai	hiq	siq	read	writ	used	buff	cach	free	recv	send
12	1	85	2	0	0	115k	240k	119M	17.0M	415M	37.6M	0	0
39	14	37	0	0	10	0	0	128M	17.4M	415M	28.4M	843k	971k
0	0	100	0	0	0	0	0	128M	17.4M	415M	28.4M	33k	37k
52	21	13	0	0	14	0	0	128M	17.4M	415M	28.4M	1286k	1475k

Figure: snapshot of dstat results for 318 concurrent requests

Summary:

Overall, performance of lab 3's AWS instance compared to lab 2 was relatively the same. One major difference was from the # of request/second, which dropped by almost half. This was most likely due to data access and persistence.

From a memory usage perspective, Lab 3's instance performed much better, as expected, due to almost all memory being persisted to the hard drive (look at the "used" column for dstat results).