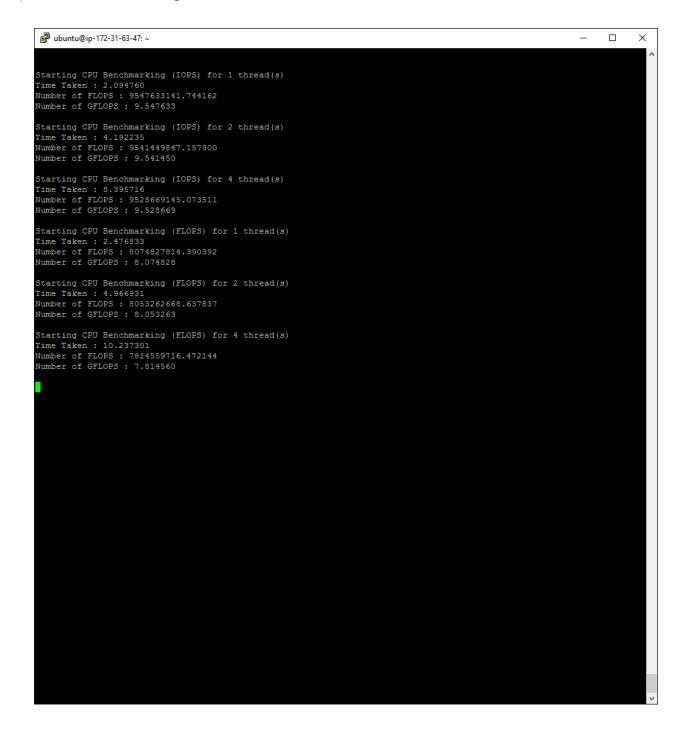
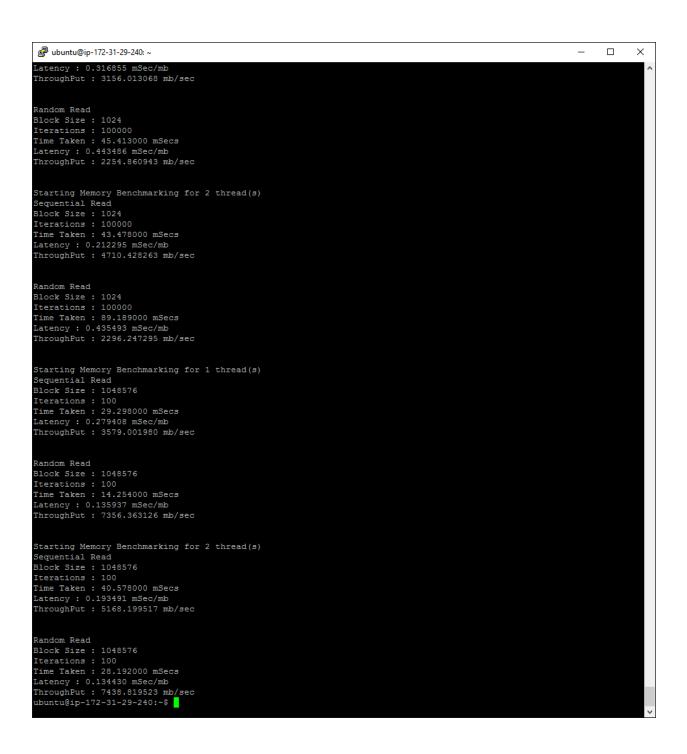
## 1) CPU Benchmarking



#### 2) Memory Benchmarking

```
■ ubuntu@ip-172-31-29-240: -

                                                                                                                                                                    ×
ubuntu@ip-172-31-29-240:~$ ./runMemory.sh
Sequential Read
Block Size : 1
Iterations : 100000000
Time Taken : 946.894000 mSecs
Latency: 9.468940 mSec/mb
ThroughPut: 105.608442 mb/sec
Random Read
Block Size : 1
Time Taken : 11469.152000 mSecs
Latency : 114.691520 mSec/mb
ThroughPut : 8.719040 mb/sec
Starting Memory Benchmarking for 2 thread(s)
Sequential Read
Sequential Read
Block Size : 1
Iterations : 100000000
Time Taken : 1825.283000 mSecs
Latency : 9.126415 mSec/mb
ThroughPut : 109.572050 mb/sec
Random Read
Block Size : 1
Time Taken : 22630.341000 mSecs
Latency : 113.151705 mSec/mb
ThroughPut : 8.837693 mb/sec
Starting Memory Benchmarking for 1 thread(s)
Sequential Read
Block Size : 1024
Iterations : 100000
Time Taken : 32.446000 mSecs
Latency: 0.316855 mSec/mb
ThroughPut: 3156.013068 mb/sec
Random Read
Random Red
Block Size: 1024
Iterations: 100000
Time Taken: 45.413000 mSecs
Latency: 0.443486 mSec/mb
ThroughPut: 2254.860943 mb/sec
Starting Memory Benchmarking for 2 thread(s)
Sequential Read
Block Size : 1024
Iterations : 100000
Time Taken: 43.478000 mSecs
Latency: 0.212295 mSec/mb
ThroughPut: 4710.428263 mb/sec
```



## 3) Disk Benchmarking

```
■ ubuntu@ip-172-31-29-240: ~

ubuntu@ip-172-31-29-240:~$ ./runDisk.sh
Sequential Write
Block Size : 1
Iterations : 100000000
File Name : temp1
Time Taken : 2907.175000 mSecs
Latency: 29.071750 mSec/mb
ThroughPut: 34.397654 mb/sec
Random Write
Block Size : 1
File Name : temp1_rand
Time Taken : 117142.164000 mSecs
Latency : 1171.421640 mSec/mb
ThroughPut : 0.853664 mb/sec
Sequential Write
Block Size : 1
Iterations : 100000000
File Name : temp2
Time Taken : 5821.622000 mSecs
Latency : 29.108110 mSec/mb
ThroughPut : 34.354687 mb/sec
Random Write
Block Size : 1
File Name : temp2 rand
Time Taken : 260669.119000 mSecs
Latency : 1303.345595 mSec/mb
ThroughPut : 0.767256 mb/sec
Starting Disk Write Benchmarking for 1 thread(s)
Sequential Write
Block Size : 1024
Iterations : 100000
File Name : temp3
Time Taken : 68.681000 mSecs
Latency : 0.670713 mSec/mb
ThroughPut : 1490.950918 mb/sec
Random Write
Block Size : 1024
Iterations: 100000
File Name : temp3 rand
Time Taken: 168.497000 mSecs
Latency: 1.645479 mSec/mb
ThroughPut : 607.725954 mb/sec
Starting Disk Write Benchmarking for 2 thread(s)
 Sequential Write
```

```
    □ ubuntu@ip-172-31-29-240: ~

                                                                                                                                                                    ×
Block Size : 1024
Iterations : 100000
File Name : temp4
Time Taken: 143.324000 mSecs
Latency: 0.699824 mSec/mb
ThroughPut: 1428.930256 mb/sec
Random Write
Block Size : 1024
File Name : temp4 rand
Time Taken : 339.694000 mSecs
 Latency: 1.658662 mSec/mb
ThroughPut : 602.895547 mb/sec
Starting Disk Write Benchmarking for 1 thread(s)
Sequential Write
Block Size : 1048576
Iterations : 100
File Name : temp5
Time Taken : 57.482000 mSecs
Latency : 0.548191 mSec/mb
ThroughPut : 1824.181483 mb/sec
Random Write
Block Size : 1048576
File Name : temp5_rand
Time Taken: 57.721000 mSecs
Latency: 0.550470 mSec/mb
ThroughPut: 1816.628264 mb/sec
Starting Disk Write Benchmarking for 2 thread(s)
Sequential Write
Block Size : 1048576
Iterations : 100
File Name : temp6
Time Taken : 113.642000 mSecs
Latency : 0.541887 mSec/mb
ThroughPut : 1845.402228 mb/sec
Random Write
Block Size : 1048576
Iterations : 100
File Name : temp6 rand
Time Taken: 115.070000 mSecs
Latency: 0.548697 mSec/mb
ThroughPut: 1822.501086 mb/sec
Starting Disk Read Benchmarking for 1 thread(s)
Sequential Read
Block Size : 1
Iterations : 100000000
```

```
    □ ubuntu@ip-172-31-29-240: ~

                                                                                                                                                                                                  ×
Sequential Read

Block Size : 1

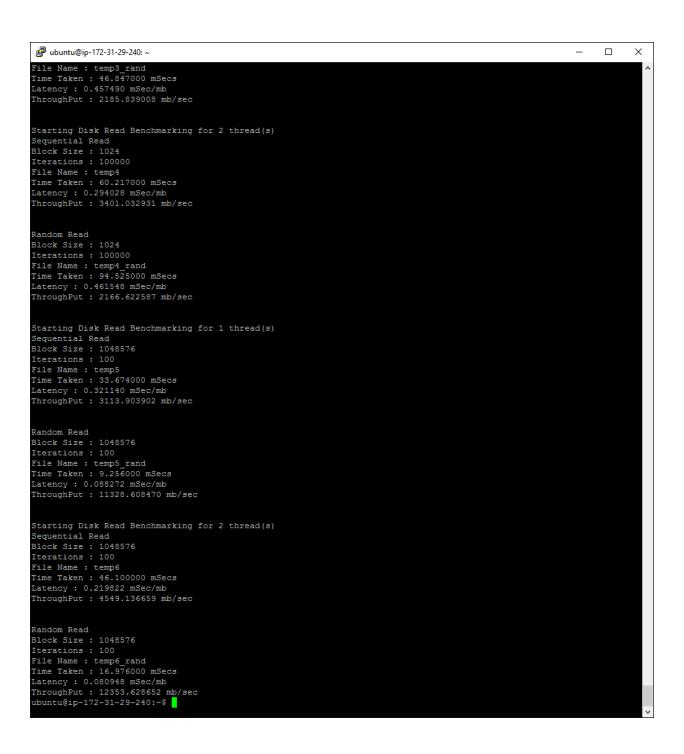
Iterations : 100000000

File Name : temp1

Time Taken : 3139.058000 mSecs

Latency : 31.390580 mSec/mb

ThroughPut : 31.856691 mb/sec
Random Read
 Block Size : 1
 Iterations : 100000000
File Name : temp1_rand
Time Taken : 33051.244000 mSecs
Latency: 330.512440 mSec/mb
ThroughPut: 3.025605 mb/sec
Starting Disk Read Benchmarking for 2 thread(s)
 Sequential Read
Sequential Read
Block Size : 1
Iterations : 100000000
File Name : temp2
Time Taken : 6227.178000 mSecs
Latency : 31.135890 mSec/mb
ThroughPut : 32.117277 mb/sec
Random Read
Block Size : 1
File Name : temp2_rand
Time Taken : 66775.969000 mSecs
Latency: 333.879845 mSec/mb
ThroughPut: 2.995089 mb/sec
 Starting Disk Read Benchmarking for 1 thread(s)
 Sequential Read
Block Size : 1024
Iterations : 100000
 File Name : temp3
Time Taken : 38.290000 mSecs
Latency : 0.373926 mSec/mb
ThroughPut : 2674.327501 mb/sec
Random Read
Block Size : 1024
Iterations: 100000
File Name : temp3_rand
Time Taken : 46.847000 mSecs
Latency: 0.457490 mSec/mb
ThroughPut: 2185.839008 mb/sec
 Starting Disk Read Benchmarking for 2 thread(s)
 Sequential Read
Block Size : 1024
Iterations : 100000
```

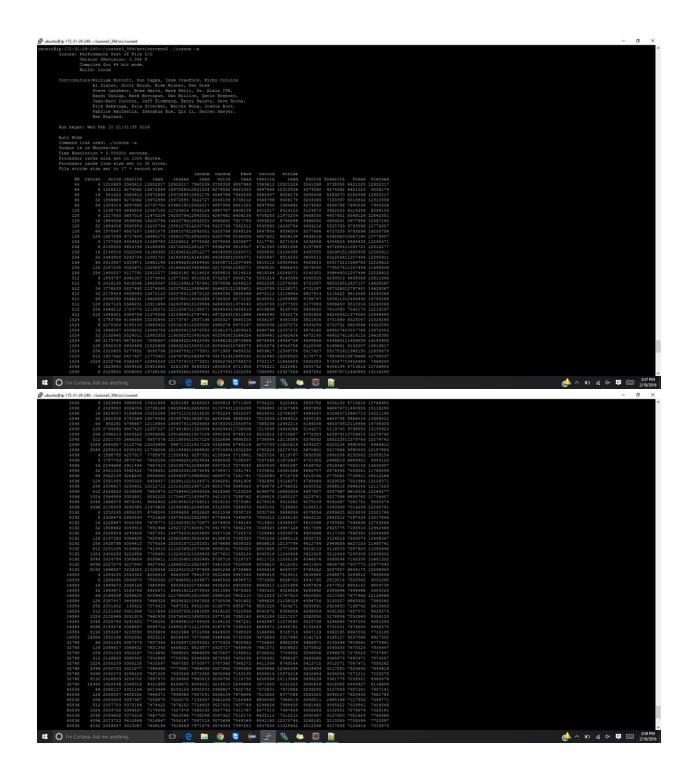


# 4) Linpack

#### 5) STREAM

```
ubuntu@ip-172-31-50-207:~$ ./stream.sh
STREAM version $Revision: 5.10 $
This system uses 8 bytes per array element.
Array size = 10000000 (elements), Offset = 0 (elements)
Memory per array = 76.3 MiB (= 0.1 GiB).
Total memory required = 228.9 MiB (= 0.2 GiB).
Each kernel will be executed 10 times.
The *best* time for each kernel (excluding the first iteration)
will be used to compute the reported bandwidth.
Your clock granularity/precision appears to be 1 microseconds.
Each test below will take on the order of 28747 microseconds.
   (= 28747 clock ticks)
Increase the size of the arrays if this shows that
you are not getting at least 20 clock ticks per test.
WARNING -- The above is only a rough guideline.
For best results, please be sure you know the
precision of your system timer.
Function Best Rate MB/s Avg time Min time Max time Copy: 5548.2 0.028954 0.028838 0.029063 Scale: 5414.8 0.029697 0.029549 0.030000
                           0.031176 0.030967
0.033083 0.032969
                                                        0.031589
Add:
                 7279.6
                                                        0.033219
Solution Validates: avg error less than 1.000000e-13 on all three arrays
ubuntu@ip-172-31-50-207:~$
```

# 6) IOZone



8192	-240: ~/iozone3_394/src/current 4096_2227274_3227840	9427042	1269852312922997 5461029 7500806	6359610	9112041	4411425	4604748 7307775	10877445		r
16384			8640909 7941872 3522665 5947263					7645856		
16384 16384			1076465611409877 4465549 6838571 885582410736066 4908251 6903839					9502395 9804734		
16384			985818212373403 5411065 7678320					9383028		
16384			7467231 8402140 4146770 6959776					9619449		
16384 16384			1003378911661588 5416182 7320858 1047584011490003 5377192 7390140					9828573 8354133		
16384			804696010744459 5144133 7467231					9581893		
			6809433 7373488 3368468 5730536							
32768 32768			910263710045381 3770325 7600952 8456321 9525977 3925727 7659409				3133596 7809561	7934447		
32768			7686825 8666959 3670637 7146812				2996675 7278523	7737457		
32768			7708382 8348959 3875580 7405193				3064973 7480971	7873087		
32768			7930326 8372355 3600064 7153135					7230278		
32768 32768			8234904 7980519 3539795 7115730 6254672 6306331 3214810 5293686				3361778 7259301 4018588 5449427	4960476 6116606		
65536	64 2068107 3351186	0321993	8233129 8300003 3369807 7632782	7572851	7970986		3157889 7907241	7957141		
65536			7938985 7907241 3506104 7676694				3049157 7820405	7861784		
65536 65536			7653396 7738286 3597322 7518170 7856167 7897019 3570686 7549349				3127600 7581624	7768466		
65536			7918859 7971679 3574354 7397581					7315873		
65536			5415267 5227822 3228395 5154978					6042892		
131072			7488146 7443838 3026992 7135811					7249960		
131072			7472777 7423634 2966652 7434979 6523912 7588301 2857465 6341423					7421930 6369563		
131072			7735652 7632443 3295329 7643161					7576797		
			7525045 7495804 3316520 7547982							
262144 262144	64 206762 190030 128 178590 167334		8245318 7961659 195985 7927904 8014411 7893981 176985 7840672			196410	172238 8162924 162286 7812093	7930306		
262144	256 166600 156367		7152234 7148328 164511 7262833			167230	153205 7283424	7316965		
262144			7507207 7535866 161074 7306948				151171 7362383	7492423		
262144			6933753 7439900 158819 7068732			164353	154606 7574021	7574021		
262144 262144	8192 157271 149372 16384 161097 148841	7344040 5340187			7618208	164033	159631 7305103 173028 5042016	7511720		
524288			8107631 7935795 85109 7883928			81607	82430 8179587			
524288			7953533 7753555 85186 7929814			81562				
524288	1024 91936 82063		7527477 7420288 85369 7619258			82542	82483 7334849 82702 7623802			
524288 524288	2048 92060 82082 4096 91980 82046		7705818 7667503 85148 3454537 7480006 7467965 85392 7645244			82686	82919 7726367			
524288			7517005 7429865 80961 7344820			85762	83119 7735364			
			5373894 5524978 82091 5338111				83188 5348355			
te test comple	ete. 29-240:~/iozone3 394/src									
		/ current								