Table 1: Performance evaluation of Single Node TeraSort

Experiment	Shared Memory (1GB)	Linux Sort (1GB)	Shared Memory (4GB)	Linux Sort (4GB)	Shared Memory (16GB)	Linux Sort (16GB)	Shared Memory (64GB)	Linux Sort (64GB)
Number of Threads	1 main & 1 buffer thread	8	1 main & 1 buffer thread	8	1 main & (2+2) buffer threads	8	1 main & (8+8) buffer threads	8
Sort Approach	Internal	sort	Internal	sort	Internal & external merge	sort	Internal & external merge	sort
Sort Algorithm	heapsort	sort	heapsort	sort	Heapsort & min-heap k-way merge	sort	Heapsort & min-heap k-way merge	sort
Data Read (GB)	1	1	4	4	16	16	64	64
Data Write (GB)	1	1	4	4	16	16	64	64
Sort Time (sec)	56.683	7.59	284 405	40.241	1640.129	185.04	7594.896	626.247
Overall I/O Throughput (MB/sec)	56.97 +/- 34.66	176.59 +/- 63.86	100.63 +/- 114.32	165.22 +/- 149.67	155.03 +/- 173.57	199.49 +/- 96.39	153.7 +/- 105.6	267.47 +/- 58.66
Overall CPU Utilization (%)	99.92 +/- 0.11	144.2 +/- 70.44	95.72 +/- 7.38	405.67 +/- 350.41	119.23 +/- 41.49	354.27+/- 301.83	99.73 +/- 0.15	160.48 +/- 108.24
Ave Memory Utilization	1.417 +/- 0.000	8.384 +/- 0.165	4.25 +/- 2.2	8.489 +/- 0.036	18.37 +/- 7.05	8.46 +/- 0.032	21.5 +/- 0.00	8.48 +/- 0.038

(GB)								