

Time Tests

Format: 1 part range, 5 parts range, 10 parts range. The time ranges result from several tries, ignoring outliers.

Note: Small files are 1000 characters long.

Small file; small repeat

Time range for threads: 0.02-0.03s, 0.03-0.09s, 0.03-0.17s

Time range for processes: 0.03-0.04s, 0.04-0.08s, 0.06-0.12s

Small file; medium repeat

Time range for threads: 0.03-0.04s, 0.03-0.12s, 0.11-0.17s

Time range for processes: 0.03-0.05s, 0.13-0.3s, 0.14-0.33s

Small file; large repeat

Time range for threads: 0.03-0.04s, 0.04-0.07s, 0.1-0.19s

Time range for processes: 0.03-0.04s, 0.04-0.12s, 0.07-0.17s

Format: 10 parts range, 50 parts range, 100 parts range. The time ranges result from several tries, ignoring outliers.

Note: Large files are 100000 characters long.

Large file; small repeat

Time range for threads: 0.91-1.12s, 0.42-0.94s, 0.84-1.57s

Time range for processes: 1.25-1.39s, 2.76-2.90s, 5.16-6.07s

Large file; medium repeat

Time range for threads: 3.87-5.49s, 0.69-1.28s, 0.88-1.21s

Time range for processes: 4.51-5s, 2.83-3.56s, 5.01-5.3s

Large file; large repeat

Time range for threads: 2.3-2.64s, 0.63-1.06s, 0.64-0.99s

Time range for processes: 2.93-3.18s, 2.88-3.66s, 5.16-5.32s

Conclusion

In general, threads seem to perform the tasks faster, though this is not noticeable for small files. There appears to be a sweet spot for number of parts. Too far in either direction leads to longer runtimes. Character repetition does not seem to have a large impact on runtime. The inherent randomness in background processes running on the iLabs machines did cause a bit of inconsistency with the timings.