

System call use case

Imagine you're a software architect encountering performance issues in your software. Determined to address these issues, you decide to gain insights from the system to inform your decision-making process. Upon investigation, you discover that various commands in the user space serve similar purposes but may exhibit differences in performance. Some examples include:

- `ls` **VS.** `find`
- `cp` **VS.** `rsync`
- `diff` **VS.** `cmp`
- `sort` **VS.** `uniq`
- `grep` **VS.** `sed`

Your Main Tasks:

Time Measurement:

- Measure the execution time for each command to assess their performance.

System Interaction Identification:

- Identify which system stack (e.g., file system, network) each command interacts with during execution.

Syscall Time Breakdown:

- Break down the total execution time of each command into time per system call to understand their resource consumption.

Performance Evaluation:

- Analyze the results to determine which command performs better than the other based on execution time, system interaction, and syscall breakdown.

Hints:

- Utilize the `tldr` command for each command to find practical use cases and examples (`tldr ls`, `tldr find`, etc.).
- To Measure total time please use **time** command.