**Perf profiler**

* Site:
  + <https://perf.wiki.kernel.org/index.php/Tutorial>
* Métricas (mesmas métricas extraídas no Sniper para os três programas):
  + Métrica 1:
  + Métrica 2:
  + Métrica 3:
* Programas selecionados:
  + fft
  + fork
  + signal
  + smc
  + true
* Execução dos programas:
  + perf stat -B dd if=/dev/zero of=/dev/null count=1000000

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| **Programa** | **Comando de execução** |
| fft | perf stat -B fft |
| **Resultado da Execução** | |
| FFT with Blocking Transpose  1024 Complex Doubles  1 Processors  65536 Cache lines  16 Byte line size  4096 Bytes per page  PROCESS STATISTICS  Computation Transpose Transpose  Proc Time Time Fraction  0 303 61 0.20132  TIMING INFORMATION  Start time : 695908542  Initialization finish time : 695908777  Overall finish time : 695909080  Total time with initialization : 538  Total time without initialization : 303  Overall transpose time : 61  Overall transpose fraction : 0.20132  Performance counter stats for './fft':  1.06 msec task-clock # 0.746 CPUs utilized  0 context-switches # 0.000 /sec  0 cpu-migrations # 0.000 /sec  62 page-faults # 58.701 K/sec  2540158 cycles # 2.405 GHz  1814472 stalled-cycles-frontend # 71.43% frontend cycles idle  1042654 stalled-cycles-backend # 41.05% backend cycles idle  2132716 instructions # 0.84 insn per cycle  # 0.85 stalled cycles per insn  195210 branches # 184.823 M/sec  6000 branch-misses # 3.07% of all branches  0.001415500 seconds time elapsed  0.001717000 seconds user  0.000000000 seconds sys | |
|  | |
| **Programa** | **Comando de execução** |
| fft | perf stat -B ./fft if=/dev/zero of=/dev/null count=1000000 |
| **Resultado da Execução** | |
| FFT with Blocking Transpose  1024 Complex Doubles  1 Processors  65536 Cache lines  16 Byte line size  4096 Bytes per page  PROCESS STATISTICS  Computation Transpose Transpose  Proc Time Time Fraction  0 335 59 0.17612  TIMING INFORMATION  Start time : 760328360  Initialization finish time : 760328587  Overall finish time : 760328922  Total time with initialization : 562  Total time without initialization : 335  Overall transpose time : 59  Overall transpose fraction : 0.17612  Performance counter stats for './fft if=/dev/zero of=/dev/null count=1000000':  1.01 msec task-clock # 0.731 CPUs utilized  0 context-switches # 0.000 /sec  0 cpu-migrations # 0.000 /sec  62 page-faults # 61.198 K/sec  2561675 cycles # 2.529 GHz  1839401 stalled-cycles-frontend # 71.80% frontend cycles idle  1031193 stalled-cycles-backend # 40.25% backend cycles idle  2135867 instructions # 0.83 insn per cycle  # 0.86 stalled cycles per insn  195848 branches # 193.316 M/sec  5650 branch-misses # 2.88% of all branches  0.001386500 seconds time elapsed  0.001920000 seconds user  0.000000000 seconds sys | |
| **Programa** | **Comando de execução** |
| fork | perf stat -B ./fork |
| **Resultado da Execução** | |
| Hello world from parent  Hello world from child  Performance counter stats for './fork':  0.94 msec task-clock # 0.045 CPUs utilized  2 context-switches # 2.139 K/sec  0 cpu-migrations # 0.000 /sec  55 page-faults # 58.811 K/sec  1820753 cycles # 1.947 GHz  1528003 stalled-cycles-frontend # 83.92% frontend cycles idle  1222034 stalled-cycles-backend # 67.12% backend cycles idle  578101 instructions # 0.32 insn per cycle  # 2.64 stalled cycles per insn  118406 branches # 126.610 M/sec  6079 branch-misses # 5.13% of all branches  0.020806800 seconds time elapsed  0.001550000 seconds user  0.000000000 seconds sys | |
| **Programa** | **Comando de execução** |
| signal | perf stat -B ./signal |
| **Resultado da Execução** | |
| Installing signal handler  Dereferencing NULL pointer  Received signal 11  Performance counter stats for './signal':  0.45 msec task-clock # 0.545 CPUs utilized  0 context-switches # 0.000 /sec  0 cpu-migrations # 0.000 /sec  30 page-faults # 66.800 K/sec  978289 cycles # 2.178 GHz  798099 stalled-cycles-frontend # 81.58% frontend cycles idle  634507 stalled-cycles-backend # 64.86% backend cycles idle  350129 instructions # 0.36 insn per cycle  # 2.28 stalled cycles per insn  70957 branches # 157.998 M/sec  3626 branch-misses # 5.11% of all branches  0.000824699 seconds time elapsed  0.000910000 seconds user  0.000000000 seconds sys | |
| **Programa** | **Comando de execução** |
| smc | perf stat -B ./smc |
| **Resultado da Execução** | |
| Good morning!  Performance counter stats for './smc':  0.47 msec task-clock # 0.588 CPUs utilized  0 context-switches # 0.000 /sec  0 cpu-migrations # 0.000 /sec  29 page-faults # 61.259 K/sec  1070708 cycles # 2.262 GHz  842947 stalled-cycles-frontend # 78.73% frontend cycles idle  621900 stalled-cycles-backend # 58.08% backend cycles idle  493319 instructions # 0.46 insn per cycle  # 1.71 stalled cycles per insn  92454 branches # 195.298 M/sec  3768 branch-misses # 4.08% of all branches  0.000805700 seconds time elapsed  0.000894000 seconds user  0.000000000 seconds sys | |
| **Programa** | **Comando de execução** |
| true | perf stat -B ./true |
| **Resultado da Execução** | |
| Performance counter stats for './true':  0.48 msec task-clock # 0.548 CPUs utilized  0 context-switches # 0.000 /sec  0 cpu-migrations # 0.000 /sec  28 page-faults # 58.700 K/sec  855835 cycles # 1.794 GHz  697077 stalled-cycles-frontend # 81.45% frontend cycles idle  536036 stalled-cycles-backend # 62.63% backend cycles idle  323449 instructions # 0.38 insn per cycle  # 2.16 stalled cycles per insn  64571 branches # 135.369 M/sec  3028 branch-misses # 4.69% of all branches  0.000870500 seconds time elapsed  0.000992000 seconds user  0.000000000 seconds sys | |