

Benchmark Results

| <i>all times in μs</i> | | Crystal 0.35.1 | | | Node.js 12.16 | | | LuaJIT 2.0 | | Lua 5.4.1 | | Ruby 2.7.2 jit | | Ruby 2.7.2 | |
|---------------------------------------|----------|-----------------------|---------------|----------------|----------------------|----------------|---------------|-------------------|---------------|------------------|---------------|-----------------------|---------------|-------------------|---------------|
| Benchmark: | <i>n</i> | <i>average</i> | <i>factor</i> | <i>average</i> | <i>factor</i> | <i>average</i> | <i>factor</i> | <i>average</i> | <i>factor</i> | <i>average</i> | <i>factor</i> | <i>average</i> | <i>factor</i> | <i>average</i> | <i>factor</i> |
| DeltaBlue | 12000 | 19 | 1.0 | 65 | 3.4 | 345 | 18.2 | 647 | 34.1 | 973 | 51.3 | 658 | 34.7 | | |
| Richards | 100 | 1'835 | 1.0 | 5'746 | 3.1 | 34'879 | 19.0 | 151'299 | 82.4 | 136'304 | 74.3 | 161'514 | 88.0 | | |
| Json | 100 | 2'887 | 1.0 | 5'036 | 1.7 | 6'611 | 2.3 | 32'835 | 11.4 | 56'109 | 19.4 | 47'652 | 16.5 | | |
| Havlak | 3 | 875'193 | 1.0 | 727'663 | 0.8 | 7'975'396 | 9.1 | 17'119'432 | 19.6 | 9'824'831 | 11.2 | 9'316'071 | 10.6 | | |
| Bounce | 1500 | 62 | 1.0 | 142 | 2.3 | 217 | 3.5 | 2'408 | 38.8 | 1'764 | 28.4 | 2'556 | 41.2 | | |
| List | 1500 | 68 | 1.0 | 237 | 3.5 | 599 | 8.8 | 1'639 | 23.9 | 1'606 | 23.5 | 2'581 | 37.7 | | |
| Mandelbrot | 500 | 1 | 1.0 | 14 | 13.9 | 2 | 2.0 | 2 | 2.0 | 16 | 15.8 | 13 | 12.9 | | |
| Permute | 1000 | 171 | 1.0 | 159 | 0.9 | 292 | 1.7 | 3'597 | 21.0 | 2'870 | 16.8 | 4'724 | 27.6 | | |
| Queens | 1000 | 147 | 1.0 | 223 | 1.5 | 265 | 1.8 | 2'100 | 14.3 | 2'493 | 16.9 | 3'137 | 21.3 | | |
| Sieve | 3000 | 41 | 1.0 | 104 | 2.6 | 103 | 2.5 | 850 | 20.9 | 950 | 23.4 | 1'410 | 34.7 | | |
| Storage | 1000 | 662 | 1.0 | 314 | 0.5 | 2'144 | 3.2 | 5'876 | 8.9 | 5'580 | 8.4 | 5'572 | 8.4 | | |
| Towers | 600 | 212 | 1.0 | 299 | 1.4 | 299 | 1.4 | 5'740 | 27.1 | 4'403 | 20.8 | 7'314 | 34.6 | | |
| geomean of factors: | | 1.0 | | | 2.0 | | | 4.0 | | 18.6 | | 21.6 | | 25.1 | |

Benchmarks used from <https://github.com/smarr/are-we-fast-yet> commit 770c664 3.4.2020

NOTE: CD didn't work on any of the Lua VMs, thus left out

NOTE: NBody caused an exception in Crystal, thus left out

Testmachine: HP EliteBook 2530p, Intel Core Duo L9400 1.86GHz, 4GB RAM, Linux i386

LuaJIT, Lua and Ruby compiled on test machine with GCC 4.8.2; Crystal and Node using precompiled binaries

Lua and Ruby built with default options

LuaJIT params, deviations from default values:

```

maxtrace      100000
maxrecord     40000
maxside       100
maxsnap       1000
sizemcode     64
maxmcode      5120
    
```