**A-priori analysis on parallelizable code percentage**

**Comparison between serial\_v1.c & serial\_v2.c**

* *VM - 4 vCPU – Old code*

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| SLEN | PLEN | MATCH TIME 1 | TOTAL TIME 1 | POPULATE 1 | %1 | Speedup, n=8 | MATCH 2 | TOTAL TIME 2 | POPULATE 2 | %2 |
|  | **10** | 0.00004 | 0.00011 | 0.00016 | 36.4% |  | 0.00004 | 0.00013 | 0.00012 | 13.3% |
|  | **10** | 0.0004 | 0.00061 | 0.00016 | 65.6% |  | 0.00034 | 0.00051 | 0.00012 | 66.7% |
|  | **10** | 0.00023 | 0.00045 | 0.00015 | 51.1% |  | 0.00026 | 0.00046 | 0.00014 | 56.5% |
|  | **10** |  |  |  | % |  |  |  |  | % |
|  | **10** | 0.00221 | 0.00342 | 0.00115 | 64.6% |  | 0.00244 | 0.00363 | 0.00118 | 67.2% |
|  | **10** |  |  |  | % |  |  |  |  | % |
|  |  | 0.00214 | 0.00333 | 0.00115 | 64.3% |  | 0.00229 | 0.00353 | 0.00122 | 64.9% |
|  |  |  |  |  | % |  |  |  |  | % |
|  |  | 0.02254 | 0.03373 | 0.01069 | 67% |  | 0.02454 | 0.03531 | 0.01080 | 69.5% |
|  |  |  |  |  | % |  |  |  |  | % |
|  |  | 0.04805 | 0.05881 | 0.01105 | 81.7% |  | 0.05213 | 0.06327 | 0.01112 | 82.4% |
|  |  |  |  |  | % |  |  |  |  | % |
|  |  | 0.50728 | 0.61254 | 0.10571 | 82.8% | 3.63 | 0.54448 | 0.64917 | 0.10459 | 83.9% |
|  |  | 0.58199 | 0.6775 | 0.09537 | 85.9% |  | 0.54177 | 0.63818 | 0.09632 | 84.9% |
|  |  | 14.48375 | 14.5918 | 0.10444 | 99.25% |  | 15.35784 | 15.46826 | 0.11032 | 99.28% |
|  |  |  |  |  | % |  |  |  |  | % |
|  |  | 169.9615 | 171.04223 | 1.08059 | 99.36% |  | 189.83723 | 191.02516 | 1.18782 | 99.38% |
|  |  |  |  |  | % |  |  |  |  | % |
|  |  |  |  |  |  |  |  |  |  |  |

* *VM 2vCPU*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| SLEN | PLEN | MATCH TIME 1 | TOTAL TIME 1 | %1 | MATCH 2 | TOTAL TIME 2 | %2 |
|  | | **Version 1** | | | **Version 2** | | |
|  | **10** | 0.00003 | 0.0001 | 29.62188 | 0.00003 | 0.00010 | 28.81991 |
|  | **10** | 0.0002 | 0.00046 | 43.478 | 0.00019 | 0.00046 | 40.15063 |
|  |  | 0.00019 | 0.00038 | 51.31718 | 0.00019 | 0.00038 | 49.77864 |
|  | **10** | 0.00194 | 0.00305 | 63.73054 | 0.00175 | 0.00296 | 59.17082 |
|  |  | 0.00177 | 0.0029 | 60.88906 | 0.00173 | 0.00287 | 60.37757 |
|  |  | 0.01949 | 0.02967 | 65.68999 | 0.01547 | 0.02525 | 61.25466 |
|  |  | 0.04122 | 0.05085 | 81.06793 | 0.03991 | 0.04979 | 80.14578 |
|  |  | 0.19065 | 0.28348 | 67.25468 | 0.15494 | 0.24833 | 62.39440 |
|  |  | 0.44433 | 0.53645 | 82.82867 | 0.39396 | 0.48612 | 81.04224 |
|  |  | 12.81745 | 12.90995 | 99.2835 | 13.10603 | 13.19893 | 99.29617 |
|  |  | 4.33195 | 5.23731 | 82.71319 | 3.98295 | 4.89723 | 81.33073 |
|  |  | 137.68859 | 138.59632 | 99.34505 | 144.16187 | 145.08619 | 99.36292 |
|  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| SLEN | PLEN | S\_exp 2 | S\_exp 4 | S\_exp 8 | S\_exp 16 | S\_exp 24 | S\_exp 2 | S\_exp 4 | S\_exp 8 | S\_exp 16 | S\_exp 24 |
|  | | **Version 1** | | | | | **Version 2** | | | | |
|  | **10** | 1.15911 | 1.25930 | 1.31618 | 1.34659 | 1.35704 | 1.16836 | 1.27575 | 1.33721 | 1.37021 | 1.38158 |
|  | **10** | 1.2778 | 1.4839 | 1.61403 | 1.68807 | 1.71428 | 1.25118 | 1.43088 | 1.54159 | 1.60362 | 1.62543 |
|  |  | 1.34515 | 1.62570 | 1.81497 | 1.92715 | 1.96769 | 1.33137 | 1.59576 | 1.77168 | 1.87503 | 1.91221 |
|  | **10** | 1.46768 | 1.91563 | 2.26061 | 2.48431 | 2.56905 | 1.42016 | 1.79785 | 2.07359 | 2.24581 | 2.30976 |
|  |  | 1.43770 | 1.84050 | 2.14032 | 2.33011 | 2.40108 | 1.43243 | 1.82759 | 2.12001 | 2.30436 | 2.37315 |
|  |  | 1.48909 | 1.97112 | 2.35176 | 2.60311 | 2.69927 | 1.44149 | 1.84983 | 2.15507 | 2.34886 | 2.42145 |
|  |  | 1.68163 | 2.55108 | 3.4405 | 4.16687 | 4.48231 | 1.66869 | 2.50685 | 3.34757 | 4.02199 | 4.31153 |
|  |  | 1.50664 | 2.0178 | 2.43001 | 2.70645 | 2.81313 | 1.45343 | 1.87955 | 2.20241 | 2.40933 | 2.48723 |
|  |  | 1.7069 | 2.64002 | 3.63307 | 4.47465 | 4.84907 | 1.68127 | 2.54983 | 3.43784 | 4.16269 | 4.47737 |
|  |  | 1.98577 | 3.91583 | 7.61792 | 14.44728 | 20.60449 | 1.98602 | 3.91729 | 7.62436 | 14.47211 | 20.65615 |
|  |  | 1.70522 | 2.634 | 3.61978 | 4.45308 | 4.82318 | 1.68536 | 2.56397 | 3.46793 | 4.21009 | 4.53349 |
|  |  | 1.98699 | 3.92292 | 7.64931 | 14.56874 | 20.858 | 1.98734 | 3.92498 | 7.65846 | 14.60437 | 20.93274 |
|  |  |  |  |  |  |  |  |  |  |  |  |