

| MEDIAN of timing | | | branch | | | | | |
|------------------|---------|---------|---------|---------|---------|---------|---------|--|
| rows | workers | columns | master | patch-1 | patch-2 | patch-1 | patch-2 | |
| 10000 | 0 | 1 | 0.473 | 0.428 | 0.446 | 90.49% | 94.29% | |
| | | 5 | 0.473 | 0.561 | 0.494 | 118.60% | 104.44% | |
| | | 10 | 0.587 | 0.586 | 0.583 | 99.83% | 99.32% | |
| | | 20 | 0.706 | 0.779 | 0.724 | 110.34% | 102.55% | |
| | 2 | 1 | 2.527 | 2.482 | 2.521 | 98.22% | 99.76% | |
| | | 5 | 2.562 | 2.51 | 2.53 | 97.97% | 98.75% | |
| | | 10 | 2.55 | 2.569 | 2.544 | 100.75% | 99.76% | |
| | | 20 | 2.621 | 2.614 | 2.633 | 99.73% | 100.46% | |
| | 4 | 1 | 3.085 | 2.942 | 3.016 | 95.36% | 97.76% | |
| | | 5 | 3.191 | 3.064 | 3.098 | 96.02% | 97.09% | |
| | | 10 | 3.231 | 3.192 | 3.161 | 98.79% | 97.83% | |
| | | 20 | 3.506 | 3.464 | 3.42 | 98.80% | 97.55% | |
| | 8 | 1 | 3.3 | 3.126 | 3.153 | 94.73% | 95.55% | |
| | | 5 | 3.384 | 3.295 | 3.305 | 97.37% | 97.67% | |
| | | 10 | 3.57 | 3.454 | 3.552 | 96.75% | 99.50% | |
| | | 20 | 4.28 | 4.098 | 4.211 | 95.75% | 98.39% | |
| 16 | 1 | 3.292 | 3.115 | 3.106 | 94.62% | 94.35% | | |
| | 5 | 3.401 | 3.366 | 3.385 | 98.97% | 99.53% | | |
| | 10 | 3.508 | 3.469 | 3.513 | 98.89% | 100.14% | | |
| | 20 | 4.411 | 4.164 | 4.144 | 94.40% | 93.95% | | |
| 1000000 | 0 | 1 | 36.485 | 36.255 | 35.907 | 99.37% | 98.42% | |
| | | 5 | 56.395 | 54.81 | 57.98 | 97.19% | 102.81% | |
| | | 10 | 99.597 | 96.159 | 98.019 | 96.55% | 98.42% | |
| | | 20 | 188.615 | 186.75 | 190.928 | 99.01% | 101.23% | |
| | 2 | 1 | 90.414 | 59.627 | 59.269 | 65.95% | 65.55% | |
| | | 5 | 116.814 | 89.368 | 87.118 | 76.50% | 74.58% | |
| | | 10 | 133.165 | 98.015 | 103.923 | 73.60% | 78.04% | |
| | 4 | 20 | 168.829 | 144.868 | 134.327 | 85.81% | 79.56% | |
| | | 1 | 76.726 | 53.297 | 53.051 | 69.46% | 69.14% | |
| | | 5 | 98.568 | 84.601 | 85.014 | 85.83% | 86.25% | |

| | | | | | | | |
|----------|----|----|----------|----------|----------|---------|---------|
| | | 10 | 106.138 | 94.088 | 92.978 | 88.65% | 87.60% |
| | | 20 | 126.599 | 101.176 | 104.958 | 79.92% | 82.91% |
| | 8 | 1 | 74.933 | 61.632 | 55.421 | 82.25% | 73.96% |
| | | 5 | 132.468 | 102.638 | 107.924 | 77.48% | 81.47% |
| | | 10 | 136.411 | 118.481 | 117.017 | 86.86% | 85.78% |
| | | 20 | 141.444 | 133.463 | 130.48 | 94.36% | 92.25% |
| | 16 | 1 | 74.962 | 57.881 | 62.083 | 77.21% | 82.82% |
| | | 5 | 132.612 | 119.391 | 73.579 | 90.03% | 55.48% |
| | | 10 | 157.842 | 130.507 | 96.832 | 82.68% | 61.35% |
| | | 20 | 158.277 | 129.393 | 135.439 | 81.75% | 85.57% |
| 10000000 | 0 | 1 | 448.135 | 442.769 | 460.97 | 98.80% | 102.86% |
| | | 5 | 773.074 | 762.143 | 790.46 | 98.59% | 102.25% |
| | | 10 | 1218.616 | 1163.369 | 1178.694 | 95.47% | 96.72% |
| | | 20 | 2280.053 | 2070.868 | 2089.979 | 90.83% | 91.66% |
| | 2 | 1 | 854.851 | 549.756 | 537.91 | 64.31% | 62.92% |
| | | 5 | 1030.893 | 729.961 | 743.525 | 70.81% | 72.12% |
| | | 10 | 1242.117 | 1034.526 | 889.432 | 83.29% | 71.61% |
| | | 20 | 1684.436 | 1356.509 | 1336.003 | 80.53% | 79.31% |
| | 4 | 1 | 741.838 | 450.668 | 460.612 | 60.75% | 62.09% |
| | | 5 | 841.454 | 695.959 | 755.471 | 82.71% | 89.78% |
| | | 10 | 1346.938 | 744.709 | 1234.333 | 55.29% | 91.64% |
| | | 20 | 1425.212 | 978.808 | 1570.687 | 68.68% | 110.21% |
| | 8 | 1 | 674.865 | 535.999 | 582.745 | 79.42% | 86.35% |
| | | 5 | 868.295 | 624.003 | 834.336 | 71.87% | 96.09% |
| | | 10 | 1223.691 | 955.732 | 895.138 | 78.10% | 73.15% |
| | | 20 | 1406.087 | 1242.194 | 1334.117 | 88.34% | 94.88% |
| | 16 | 1 | 663.222 | 526.583 | 537.432 | 79.40% | 81.03% |
| | | 5 | 1163.999 | 675.831 | 831.335 | 58.06% | 71.42% |
| | | 10 | 1100.371 | 925.356 | 897.968 | 84.09% | 81.61% |
| | | 20 | 1209.277 | 1318.874 | 1130.249 | 109.06% | 93.46% |