

Analysis from MPI-3 Questionary at SC09

| (Q16) Priority: | NA | 100 | 60 | 20 | -20 | -60 | -100 | sum# | Percentage with priority ... | | | | sum of prio * # / sum# | ... interest | Tickets | Status |
|---|-----|-----|-----|-----|-----|-----|------|------|------------------------------|-------|--------|---------|------------------------|--------------|---|---------------------------------|
| | | | | | | | | | >= 0 | >= 50 | <= -50 | <= -100 | | | | |
| Non-blocking collective communications | 181 | 243 | 135 | 120 | 86 | 45 | 28 | 838 | 59% | 45% | 9% | 19% | 33 | high | #109 NBC | accepted |
| Revamped one-sided communications (compared to MPI-2.2) | 267 | 50 | 76 | 115 | 90 | 145 | 95 | 838 | 29% | 15% | 29% | 39% | -10 | small | #270 RMA | candidate for TOP3 |
| MPI application control of fault tolerance | 223 | 74 | 129 | 125 | 144 | 95 | 48 | 838 | 39% | 24% | 17% | 34% | 5 | some | #? FT-stabilization | candidate for TOP3 |
| New Fortran bindings (type safety, etc.) | 210 | 68 | 72 | 78 | 64 | 99 | 247 | 838 | 26% | 17% | 41% | 49% | -23 | small | #229 Fortran | candidate for TOP3 |
| Hybrid' programming (MPI in conjunction with threads, OpenMP, ..) | 160 | 217 | 175 | 105 | 89 | 59 | 33 | 838 | 59% | 47% | 11% | 22% | 31 | high | #38 MPROBE, Hybrid proposals | accepted and candidate for TOP3 |
| Standardized third-party MPI tool support | 223 | 32 | 84 | 103 | 132 | 140 | 124 | 838 | 26% | 14% | 32% | 47% | -16 | small | #266 MPI-T | candidate for TOP3 |
| (Q17) Priority: *) | NA | 100 | 50 | 0 | -0 | -50 | -100 | | | | | | | | | |
| Run-time performance (e.g., latency, bandwidth, resource consumption, etc.) | 105 | 397 | 206 | 45 | 45 | 27 | 14 | 838 | 77% | 72% | 5% | 10% | 56 | extreme | part of #109 NBC, #229 Fortran, #258 Neighbor-Coll, #270 RMA, and Persistence | candidate for TOP3 |
| Feature-rich API | 162 | 14 | 38 | 35 | 35 | 283 | 271 | 838 | 10% | 6% | 66% | 70% | -45 | no | | |
| Run-time reliability | 125 | 149 | 201 | 136 | 136 | 62 | 30 | 838 | 58% | 42% | 11% | 27% | 22 | high | | |
| Scalability to large numbers of MPI processes | 114 | 158 | 254 | 113 | 113 | 70 | 17 | 838 | 63% | 49% | 10% | 24% | 28 | high | #258 Neighbor-Coll. | candidate for TOP3 |
| Integration with other middleware, communication protocols, etc. | 170 | 17 | 31 | 28 | 28 | 234 | 331 | 838 | 9% | 6% | 67% | 71% | -50 | no | | |
| (Q13) My MPI application would benefit from being able to reference more than 2 billion items of data in a single MPI function invocation | | 62 | 102 | 188 | 188 | 210 | 53 | 802 | 44% | 20% | 33% | 56% | -6 | small | # 265 Count | candidate for TOP3 |

All percentage is based on sum#, which includes also NA (=no answer).

Priority: The original question used 1..6 in Q16 and 1..5 in Q17 for "most important" .. "least important"
 I transposed it into equidistant priorities from +100 (most important) to -100 (least important)
 *) In Q17 and Q13, half of the middle answers were counted as +0, and half as -0

Values are sorted into:
 ... interest
 -51..-100 **absolutely no**
 -31..-52 **no**
 -1..-30 **small**
 0.. 30 **some**
 31.. 50 **high**
 51..100 **extreme**

Tickets without direct background in Q13, Q16, Q17:

#140 Const candidate for TOP3
 Nonblocking IO candidate for TOP3