

Data collected by Quasar

last update: November 2007

Table 3. Quasar data variation when adding a protected object

| Program name in different extensions with N = 3 | # task | # RV | # PO | #Places/ reduced | #transitions/ reduced | #States Stored With reductions | #Arcs Visited With reductions | #States Stored without reductions | #Arcs Visited without reductions |
|---|--------|------|-------------|---------------------|--------------------------|---|--|---|--|
| dummy component | | | with | a | shared | | | procedure | |
| xx_dummy3 | 4 | 0 | 0 | 168/37 | 157/26 | 29 | 29 | 9 608 380 | 37 388 544 |
| s1_dummy3 | 4 | 0 | 1 | 192/44 | 179/30 | 65 | 65 | 16 062 612 | 6 9421 204 |
| adding a PO | | | | 24/7 | 22/4 | 36 | 36 | | |
| s2_dummy3 | 4 | 1 | 0 | 205/47 | 193/35 | 102 | 103 | 13 160 577 | 50 916 986 |
| s3_dummy3 | 4 | 1 | 1 | 229/52 | 215/37 | 102 | 103 | 19 989 509 | 77 383 894 |
| adding a PO | | | | 24/5 | 22/2 | 0 | 0 | | |
| dummy3 | 4 | 2 | 0 | 225/47 | 212/34 | 103 | 104 | 13 312 421 | 51 459 540 |
| t1_dummy3 | 4 | 2 | 1 | 249/56 | 234/40 | 108 | 109 | 20 166 873 | 78 017 848 |
| adding a PO | | | | 24/9 | 22/6 | 5 | 5 | | |
| agoraserverada | | | Ada | protected | object | | | implementation | |
| xs_agoraserverada3 | 4 | 0 | 0 | 212/58 | 196/42 | 3 279 | 3 144 | 17 316 336 | 64 230 366 |
| s1_agoraserverada3 | 4 | 0 | 1 | 236/65 | 218/46 | 3 766 | 3 901 | 72 406 616 | 273 741 102 |
| adding a PO | | | | 24/7 | 22/4 | 487 | 757 | | |
| s2_agoraserverada3 | 4 | 1 | 0 | 249/68 | 232/51 | 4 208 | 4 369 | 23 798 499 | 88 896 730 |
| s3_agoraserverada3 | 4 | 1 | 1 | 273/73 | 254/53 | 4 416 | 4 577 | 65 691 467 | 247 715 698 |
| adding a PO | | | | 24/5 | 22/2 | 208 | 208 | | |
| agoraserverada3 | 4 | 2 | 0 | 267/72 | 249/54 | 4 572 | 4 759 | 24 563 347 | 91 637 360 |
| t1_agoraserverada3 | 4 | 2 | 1 | 293/77 | 273/56 | 4 780 | 4 967 | 66 789 871 | 251 631 984 |
| adding a PO | | | | 26/5 | 24/2 | 208 | 208 | | |

Table 4. Quasar data variation when adding a rendezvous

| Program name in different extensions with N = 3 | # task | # RV | # PO | #Places/ reduced | #transitions/ reduced | #States Stored With reductions | #Arcs visited With reductions | #States Stored without reductions | #Arcs Visited without reductions |
|---|--------|------|-------------|---------------------|--------------------------|---|--|---|---|
| dummy component | | | with | a | shared | | | procedure | |
| xx_dummy3 | 4 | 0 | 0 | 168/37 | 157/26 | 29 | 29 | 9 608 380 | 37 388 544 |
| s2_dummy3 | 4 | 1 | 0 | 205/47 | 193/35 | 102 | 103 | 13 160 577 | 50 916 986 |
| adding a rendezvous | | | | 37/10 | 36/9 | 73 | 74 | | |
| s1_dummy3 | 4 | 0 | 1 | 192/44 | 179/30 | 65 | 65 | 16 062 612 | 69 421 204 |
| s3_dummy3 | 4 | 1 | 1 | 229/52 | 215/37 | 102 | 103 | 19 989 509 | 77 383 894 |
| adding a rendezvous | | | | 37/8 | 36/7 | 36 | 37 | | |
| s2_dummy3 | 4 | 1 | 0 | 205/47 | 193/35 | 102 | 103 | 13 160 577 | 50 916 986 |
| dummy3 | 4 | 2 | 0 | 225/47 | 212/34 | 103 | 104 | 13 312 421 | 51 459 540 |
| adding a rendezvous | | | | 20/0 | 19/-1 | 1 | 1 | | |
| s3_dummy3 | 4 | 1 | 1 | 229/52 | 215/37 | 102 | 103 | 19 989 509 | 77 383 894 |
| t1_dummy3 | 4 | 2 | 1 | 249/56 | 234/40 | 108 | 109 | 20 166 873 | 78 017 848 |
| adding a rendezvous | | | | 20/4 | 19/3 | 6 | 6 | | |
| dummy3 | 4 | 2 | 0 | 225/47 | 212/34 | 103 | 104 | 13 312 421 | 51 459 540 |
| t2_dummy3 | 4 | 3 | 0 | 245/55 | 231/41 | 114 | 115 | 13 464 265 | 52 002 094 |
| adding a rendezvous | | | | 20/8 | 19/7 | 11 | 11 | | |
| agoraserverada | | | Ada | protected | object | | | implementation | |
| xs_agoraserverada3 | 4 | 0 | 0 | 212/58 | 196/42 | 3 279 | 3 144 | 17 316 336 | 64 230 366 |
| s2_agoraserverada3 | 4 | 1 | 0 | 249/68 | 232/51 | 4 208 | 4 369 | 23 798 499 | 88 896 730 |
| adding a rendezvous | | | | 37/910 | 36/9 | 929 | 1 225 | | |
| s1_agoraserverada3 | 4 | 0 | 1 | 236/65 | 218/46 | 3 766 | 3 901 | 72 406 616 | 273 741 102 |
| s3_agoraserverada3 | 4 | 1 | 1 | 273/73 | 254/53 | 4 416 | 4 577 | 65 691 467 | 247 715 698 |
| adding a rendezvous | | | | 37/8 | 36/7 | 650 | 676 | | |
| s2_agoraserverada3 | 4 | 1 | 0 | 249/68 | 232/51 | 4 208 | 4 369 | 23 798 499 | 88 896 730 |
| agoraserverada3 | 4 | 2 | 0 | 267/72 | 249/54 | 4 572 | 4 759 | 24 563 347 | 91 637 360 |
| adding a rendezvous | | | | 18/4 | 17/3 | 364 | 390 | | |
| s3_agoraserverada3 | 4 | 1 | 1 | 273/73 | 254/53 | 4 416 | 4 577 | 65 691 467 | 247 715 698 |
| t1_agoraserverada3 | 4 | 2 | 1 | 293/77 | 273/56 | 4 780 | 4 967 | 66 789 871 | 251 631 984 |
| adding a rendezvous | | | | 20/4 | 19/3 | 364 | 390 | | |
| agoraserverada3 | 4 | 2 | 0 | 267/72 | 249/54 | 4 572 | 4 759 | 24 563 347 | 91 637 360 |
| t2_agoraserverada3 | 4 | 3 | 0 | 287/76 | 268/57 | 4 936 | 5 149 | 25 355 511 | 94 456 846 |
| adding a rendezvous | | | | 20/4 | 19/3 | 364 | 390 | | |

Table 5. Quasar data with different kind of reductions

| Different context names | #Places/ | ratio | #transitions/ | ratio | #States stored | ratio | #Arcs visited | ratio |
|---------------------------------|----------|-------|---------------|-------|----------------|---------|----------------|-----------|
| dummy component | | | with | a | shared | | procedure | |
| xx dummy3 (0 RV, 0 PO) | | | | | | | | |
| no reduction | 168 | 1 | 157 | 1 | 9 608 380 | 1 | 37 388 544 | 1 |
| static reduction only | 37 | 4.5 | 26 | 6.0 | 8 548 | 1124 | 28 758 | 1 300 |
| dynamic reduction only | 168 | 1 | 157 | 1 | 303 | 31 711 | 303 | 123 395 |
| static + dynamic reduction | 37 | 4.5 | 26 | 6.0 | 29 | 331 323 | 29 | 1 289 260 |
| s1 dummy3 (0 RV, 1 PO) | | | | | | | | |
| no reduction | 192 | 1 | 179 | 1 | 16 062 612 | 1 | 62 491 204 | 1 |
| static reduction only | 44 | 4.4 | 30 | 6 | 14 185 | 1 132 | 48 147 | 1 298 |
| dynamic reduction only | 192 | 1 | 179 | 1 | 526 | 30 537 | 528 | 118 355 |
| static + dynamic reduction | 44 | 4.4 | 30 | 6 | 65 | 247 117 | 65 | 961 403 |
| s2 dummy3 (1 RV, 0 PO) | | | | | | | | |
| no reduction | 205 | 1 | 193 | 1 | 13 160 577 | 1 | 50 916 986 | 1 |
| static reduction only | 47 | 4.3 | 35 | 5.5 | 19 081 | 690 | 63 071 | 807 |
| dynamic reduction only | 205 | 1 | 193 | 1 | 632 | 20 824 | 633 | 80 437 |
| static + dynamic reduction | 47 | 4.3 | 35 | 5.5 | 102 | 129 025 | 103 | 494 340 |
| s3 dummy3 (1 RV, 1 PO) | | | | | | | | |
| no reduction | 229 | 1 | 215 | 1 | 19 989 509 | 1 | 77 383 894 | 1 |
| static reduction only | 52 | 4.4 | 37 | 5.8 | 21 861 | 914 | 72 483 | 1 067 |
| dynamic reduction only | 229 | 1 | 215 | 1 | 1 422 | 14 057 | 1 430 | 54 115 |
| static + dynamic reduction | 52 | 4.4 | 37 | 5.8 | 102 | 195 976 | 103 | 751 300 |
| dummy3 (2 RV, 0 PO) | | | | | | | | |
| no reduction | 225 | 1 | 212 | 1 | 13 312 421 | 1 | 51 459 540 | 1 |
| static reduction only | 47 | 4.8 | 34 | 6.2 | 13 053 | 1 020 | 42 511 | 1 210 |
| dynamic reduction only | 225 | 1 | 212 | 1 | 670 | 19 869 | 671 | 76 690 |
| static + dynamic reduction | 47 | 4.8 | 34 | 6.2 | 103 | 129 247 | 104 | 494 803 |
| t1 dummy3 (2 RV, 1 PO) | | | | | | | | |
| no reduction | 249 | 1 | 234 | 1 | 20 166 873 | 1 | 78 017 848 | 1 |
| static reduction only | 56 | 4.4 | 40 | 5.8 | 22 185 | 909 | 72 281 | 1 079 |
| dynamic reduction only | 249 | 1 | 234 | 1 | 1 662 | 12 134 | 1 672 | 46 661 |
| static + dynamic reduction | 56 | 4.4 | 40 | 5.8 | 108 | 186 730 | 109 | 715 760 |
| t2 dummy3 (3 RV, 0 PO) | | | | | | | | |
| no reduction | 245 | 1 | 231 | 1 | 13 464 265 | 1 | 52 002 094 | 1 |
| static reduction only | 55 | 4.5 | 41 | 5.6 | 19 705 | 683 | 64 607 | 805 |
| dynamic reduction only | 245 | 1 | 231 | 1 | 708 | 19 017 | 709 | 73 346 |
| static + dynamic reduction | 55 | 4.5 | 41 | 5.6 | 114 | 118 108 | 115 | 452 192 |
| agoraserverada | | Ada | protected | | object | | implementation | |
| xs agoraserverada3 (0 RV, 0 PO) | | | | | | | | |
| no reduction | 212 | 1 | 196 | 1 | 17 316 336 | 1 | 64 230 366 | 1 |
| static reduction only | 58 | 3.7 | 42 | 4.7 | 91 878 | 188 | 268 874 | 239 |
| dynamic reduction only | 212 | 1 | 196 | 1 | 13 534 | 1 279 | 13 669 | 4 699 |
| static + dynamic reduction | 58 | 3.7 | 42 | 4.7 | 3 279 | 5 281 | 3 414 | 18 814 |
| s1 agoraserverada3 (0 RV, 1 PO) | | | | | | | | |
| no reduction | 236 | 1 | 218 | 1 | 72 406 616 | 1 | 273 741 102 | 1 |
| static reduction only | 65 | 3.6 | 46 | 4.7 | 182 484 | 397 | 561 181 | 488 |
| dynamic reduction only | 236 | 1 | 218 | 1 | 57 282 | 1 264 | 58 351 | 4 691 |
| static + dynamic reduction | 65 | 3.6 | 46 | 4.7 | 3 766 | 19 226 | 3 901 | 70 172 |
| s2 agoraserverada3 (1 RV, 0 PO) | | | | | | | | |
| no reduction | 249 | 1 | 232 | 1 | 23 798 499 | 1 | 88 896 730 | 1 |
| static reduction only | 68 | 3.7 | 51 | 4.5 | 75 223 | 316 | 218 483 | 407 |
| dynamic reduction only | 249 | 1 | 232 | 1 | 16 342 | 1 456 | 16 503 | 5 387 |
| static + dynamic reduction | 68 | 3.7 | 51 | 4.5 | 4 208 | 5 656 | 4 369 | 20 347 |
| s3 agoraserverada3 (1 RV, 1 PO) | | | | | | | | |
| no reduction | 273 | 1 | 254 | 1 | 65 691 467 | 1 | 247 715 698 | 1 |
| static reduction only | 73 | 3.7 | 53 | 4.8 | 123 451 | 532 | 369 703 | 670 |
| dynamic reduction only | 273 | 1 | 254 | 1 | 53 720 | 1 223 | 54 567 | 4 540 |
| static + dynamic reduction | 73 | 3.7 | 53 | 4.8 | 4 416 | 14 876 | 4 577 | 54 122 |
| agoraserverada3 (2 RV, 0 PO) | | | | | | | | |
| no reduction | 267 | 1 | 249 | 1 | 24 563 347 | 1 | 91 637 360 | 1 |
| static reduction only | 72 | 3.7 | 54 | 4.6 | 77 077 | 319 | 222 947 | 411 |
| dynamic reduction only | 267 | 1 | 249 | 1 | 17 980 | 1 366 | 18 167 | 5 044 |
| static + dynamic reduction | 72 | 3.7 | 54 | 4.6 | 4 572 | 5 373 | 4 759 | 19 256 |
| t1 agoraserverada3 (2 RV, 1 PO) | | | | | | | | |
| no reduction | 293 | 1 | 273 | 1 | 66 789 871 | 1 | 251 631 984 | 1 |
| static reduction only | 77 | 3.8 | 56 | 4.9 | 125 593 | 532 | 374 887 | 671 |
| dynamic reduction only | 293 | 1 | 273 | 1 | 56 494 | 1 182 | 57 391 | 4 385 |
| static + dynamic reduction | 77 | 3.8 | 56 | 4.9 | 4 780 | 13 973 | 4 967 | 50 661 |
| t2 agoraserverada3 (3 RV, 0 PO) | | | | | | | | |
| no reduction | 287 | 1 | 268 | 1 | 25 355 511 | 1 | 94 456 846 | 1 |
| static reduction only | 76 | 3.8 | 57 | 4.7 | 78 931 | 321 | 227 411 | 415 |
| dynamic reduction only | 287 | 1 | 268 | 1 | 19 722 | 1 286 | 19 935 | 4 738 |
| static + dynamic reduction | 76 | 3.8 | 57 | 4.7 | 4 936 | 5 137 | 5 149 | 18 345 |

