

## GCC 8 – size

| cc1                                    | elf (MB) | elf/relocations | elf/symbols | elf/sections/text (MB) | elf/sections/debug (MB) | elf/sections/eh (MB) | elf/sections/data (MB) | elf/sections/rodata (MB) | elf/sections/relocation (MB) |
|--|----------|-----------------|-------------|------------------------|-------------------------|----------------------|------------------------|--------------------------|------------------------------|
| system-O2-native                       | 165.4    | 480             | 61021       | 12.84                  | 139.93                  | 1.71                 | 0.05                   | 6.54                     | 0.02                         |
| system-O2-generic-no-plugin            | 163.82   | 476             | 41813       | 12.84                  | 139.93                  | 1.71                 | 0.05                   | 6.54                     | 0.02                         |
| system-O2-generic                      | 165.4    | 480             | 61021       | 12.84                  | 139.93                  | 1.71                 | 0.05                   | 6.54                     | 0.02                         |
| pgo-lto-bootstrap-O2-native-no-plugin  | 172.34   | 470             | 99247       | 13.77                  | 146.9                   | 1.47                 | 0.04                   | 5.69                     | 0.02                         |
| pgo-lto-bootstrap-O2-native            | 176.26   | 480             | 123390      | 14.08                  | 148.37                  | 1.73                 | 0.05                   | 5.72                     | 0.02                         |
| pgo-lto-bootstrap-O2-generic-no-plugin | 172.75   | 470             | 99250       | 13.86                  | 147.15                  | 1.52                 | 0.04                   | 5.69                     | 0.02                         |
| pgo-lto-bootstrap-O2-generic           | 176.51   | 480             | 123393      | 14.18                  | 148.51                  | 1.76                 | 0.05                   | 5.72                     | 0.02                         |
| pgo-bootstrap-O2-generic               | 186.1    | 480             | 68107       | 14.49                  | 158.96                  | 1.81                 | 0.05                   | 5.91                     | 0.02                         |
| lto-bootstrap-O2-generic-no-plugin     | 172.41   | 470             | 100268      | 12.94                  | 147.2                   | 1.55                 | 0.04                   | 6.42                     | 0.02                         |
| lto-bootstrap-O2-generic               | 176.34   | 480             | 124098      | 13.28                  | 148.67                  | 1.79                 | 0.05                   | 6.53                     | 0.02                         |
| bootstrap-O2-generic                   | 179.94   | 480             | 65638       | 12.99                  | 153.83                  | 1.84                 | 0.05                   | 6.54                     | 0.02                         |

| cc1                                    | elf (MB) | elf/relocations | elf/symbols | elf/sections/text (MB) | elf/sections/debug (MB) | elf/sections/eh (MB) | elf/sections/data (MB) | elf/sections/rodata (MB) | elf/sections/relocation (MB) |
|--|----------|-----------------|-------------|------------------------|-------------------------|----------------------|------------------------|--------------------------|------------------------------|
| system-O2-native                       | 100.00%  | 100.00%         | 100.00%     | 100.00%                | 100.00%                 | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |
| system-O2-generic-no-plugin            | 99.04%   | 99.17%          | 68.52%      | 100.00%                | 100.00%                 | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |
| system-O2-generic                      | 100.00%  | 100.00%         | 100.00%     | 100.00%                | 100.00%                 | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |
| pgo-lto-bootstrap-O2-native-no-plugin  | 104.20%  | 97.92%          | 162.64%     | 107.24%                | 104.98%                 | 85.96%               | 80.00%                 | 87.00%                   | 100.00%                      |
| pgo-lto-bootstrap-O2-native            | 106.57%  | 100.00%         | 202.21%     | 109.66%                | 106.03%                 | 101.17%              | 100.00%                | 87.46%                   | 100.00%                      |
| pgo-lto-bootstrap-O2-generic-no-plugin | 104.44%  | 97.92%          | 162.65%     | 107.94%                | 105.16%                 | 88.89%               | 80.00%                 | 87.00%                   | 100.00%                      |
| pgo-lto-bootstrap-O2-generic           | 106.72%  | 100.00%         | 202.21%     | 110.44%                | 106.13%                 | 102.92%              | 100.00%                | 87.46%                   | 100.00%                      |
| pgo-bootstrap-O2-generic               | 112.52%  | 100.00%         | 111.61%     | 112.85%                | 113.60%                 | 105.85%              | 100.00%                | 90.37%                   | 100.00%                      |
| lto-bootstrap-O2-generic-no-plugin     | 104.24%  | 97.92%          | 164.32%     | 100.78%                | 105.20%                 | 90.64%               | 80.00%                 | 98.17%                   | 100.00%                      |
| lto-bootstrap-O2-generic               | 106.61%  | 100.00%         | 203.37%     | 103.43%                | 106.25%                 | 104.68%              | 100.00%                | 99.85%                   | 100.00%                      |
| bootstrap-O2-generic                   | 108.79%  | 100.00%         | 107.57%     | 101.17%                | 109.93%                 | 107.60%              | 100.00%                | 100.00%                  | 100.00%                      |

| cc1 stripped                           | elf (MB) | elf/relocations | elf/symbols | elf/sections/text (MB) | elf/sections/debug (MB) | elf/sections/eh (MB) | elf/sections/data (MB) | elf/sections/rodata (MB) | elf/sections/relocation (MB) |
|--|----------|-----------------|-------------|------------------------|-------------------------|----------------------|------------------------|--------------------------|------------------------------|
| system-O2-native                       | 22.77    | 480             | 19687       | 12.84                  | 0                       | 1.71                 | 0.05                   | 6.54                     | 0.02                         |
| system-O2-generic-no-plugin            | 21.19    | 476             | 490         | 12.84                  | 0                       | 1.71                 | 0.05                   | 6.54                     | 0.02                         |
| system-O2-generic                      | 22.77    | 480             | 19687       | 12.84                  | 0                       | 1.71                 | 0.05                   | 6.54                     | 0.02                         |
| pgo-lto-bootstrap-O2-native-no-plugin  | 21.02    | 470             | 483         | 13.77                  | 0                       | 1.47                 | 0.04                   | 5.69                     | 0.02                         |
| pgo-lto-bootstrap-O2-native            | 23.07    | 480             | 18423       | 14.08                  | 0                       | 1.73                 | 0.05                   | 5.72                     | 0.02                         |
| pgo-lto-bootstrap-O2-generic-no-plugin | 21.17    | 470             | 483         | 13.86                  | 0                       | 1.52                 | 0.04                   | 5.69                     | 0.02                         |
| pgo-lto-bootstrap-O2-generic           | 23.19    | 480             | 18423       | 14.18                  | 0                       | 1.76                 | 0.05                   | 5.72                     | 0.02                         |
| pgo-bootstrap-O2-generic               | 23.94    | 480             | 20181       | 14.49                  | 0                       | 1.81                 | 0.05                   | 5.91                     | 0.02                         |
| lto-bootstrap-O2-generic-no-plugin     | 21.01    | 470             | 483         | 12.94                  | 0                       | 1.55                 | 0.04                   | 6.42                     | 0.02                         |
| lto-bootstrap-O2-generic               | 23.13    | 480             | 18423       | 13.28                  | 0                       | 1.79                 | 0.05                   | 6.53                     | 0.02                         |
| bootstrap-O2-generic                   | 23.05    | 480             | 19693       | 12.99                  | 0                       | 1.84                 | 0.05                   | 6.54                     | 0.02                         |

| cc1 stripped                           | elf (MB) | elf/relocations | elf/symbols | elf/sections/text (MB) | elf/sections/debug (MB) | elf/sections/eh (MB) | elf/sections/data (MB) | elf/sections/rodata (MB) | elf/sections/relocation (MB) |
|--|----------|-----------------|-------------|------------------------|-------------------------|----------------------|------------------------|--------------------------|------------------------------|
| system-O2-native                       | 100.00%  | 100.00%         | 100.00%     | 100.00%                |                         | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |
| system-O2-generic-no-plugin            | 93.06%   | 99.17%          | 2.49%       | 100.00%                |                         | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |
| system-O2-generic                      | 100.00%  | 100.00%         | 100.00%     | 100.00%                |                         | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |
| pgo-lto-bootstrap-O2-native-no-plugin  | 92.31%   | 97.92%          | 2.45%       | 107.24%                |                         | 85.96%               | 80.00%                 | 87.00%                   | 100.00%                      |
| pgo-lto-bootstrap-O2-native            | 101.32%  | 100.00%         | 93.58%      | 109.66%                |                         | 101.17%              | 100.00%                | 87.46%                   | 100.00%                      |
| pgo-lto-bootstrap-O2-generic-no-plugin | 92.97%   | 97.92%          | 2.45%       | 107.94%                |                         | 88.89%               | 80.00%                 | 87.00%                   | 100.00%                      |
| pgo-lto-bootstrap-O2-generic           | 101.84%  | 100.00%         | 93.58%      | 110.44%                |                         | 102.92%              | 100.00%                | 87.46%                   | 100.00%                      |
| pgo-bootstrap-O2-generic               | 105.14%  | 100.00%         | 102.51%     | 112.85%                |                         | 105.85%              | 100.00%                | 90.37%                   | 100.00%                      |
| lto-bootstrap-O2-generic-no-plugin     | 92.27%   | 97.92%          | 2.45%       | 100.78%                |                         | 90.64%               | 80.00%                 | 98.17%                   | 100.00%                      |
| lto-bootstrap-O2-generic               | 101.58%  | 100.00%         | 93.58%      | 103.43%                |                         | 104.68%              | 100.00%                | 99.85%                   | 100.00%                      |
| bootstrap-O2-generic                   | 101.23%  | 100.00%         | 100.03%     | 101.17%                |                         | 107.60%              | 100.00%                | 100.00%                  | 100.00%                      |

| cc1plus                                | elf (MB) | elf/relocations | elf/symbols | elf/sections/text (MB) | elf/sections/debug (MB) | elf/sections/eh (MB) | elf/sections/data (MB) | elf/sections/rodata (MB) | elf/sections/relocation (MB) |
|--|----------|-----------------|-------------|------------------------|-------------------------|----------------------|------------------------|--------------------------|------------------------------|
| system-O2-native                       | 175.16   | 480             | 65557       | 13.76                  | 148.17                  | 1.84                 | 0.05                   | 6.7                      | 0.02                         |
| system-O2-generic-no-plugin            | 173.47   | 476             | 44848       | 13.76                  | 148.16                  | 1.84                 | 0.05                   | 6.7                      | 0.02                         |
| system-O2-generic                      | 175.16   | 480             | 65557       | 13.76                  | 148.17                  | 1.84                 | 0.05                   | 6.7                      | 0.02                         |
| pgo-lto-bootstrap-O2-native-no-plugin  | 183.68   | 472             | 107125      | 15.06                  | 156.25                  | 1.62                 | 0.05                   | 5.87                     | 0.02                         |
| pgo-lto-bootstrap-O2-native            | 187.58   | 480             | 133367      | 15.36                  | 157.59                  | 1.89                 | 0.05                   | 5.89                     | 0.02                         |
| pgo-lto-bootstrap-O2-generic-no-plugin | 184.11   | 472             | 107129      | 15.17                  | 156.53                  | 1.65                 | 0.05                   | 5.87                     | 0.02                         |

|                                    |        |     |        |       |        |      |      |      |      |
|------------------------------------|--------|-----|--------|-------|--------|------|------|------|------|
| pgo-lto-bootstrap-O2-generic       | 187.9  | 480 | 133372 | 15.47 | 157.78 | 1.91 | 0.05 | 5.89 | 0.02 |
| pgo-bootstrap-O2-generic           | 198.65 | 480 | 73697  | 15.78 | 169.45 | 1.97 | 0.05 | 6.13 | 0.02 |
| lto-bootstrap-O2-generic-no-plugin | 181.48 | 472 | 108099 | 13.86 | 154.74 | 1.67 | 0.05 | 6.58 | 0.02 |
| lto-bootstrap-O2-generic           | 185.45 | 480 | 133857 | 14.2  | 156.1  | 1.93 | 0.05 | 6.69 | 0.02 |
| bootstrap-O2-generic               | 190.26 | 480 | 70651  | 13.91 | 162.58 | 1.99 | 0.05 | 6.7  | 0.02 |

| cc1plus                                | elf (MB) | elf/relocations | elf/symbols | elf/sections/text (MB) | elf/sections/debug (MB) | elf/sections/eh (MB) | elf/sections/data (MB) | elf/sections/rodata (MB) | elf/sections/relocation (MB) |
|--|----------|-----------------|-------------|------------------------|-------------------------|----------------------|------------------------|--------------------------|------------------------------|
| system-O2-native                       | 100.00%  | 100.00%         | 100.00%     | 100.00%                | 100.00%                 | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |
| system-O2-generic-no-plugin            | 99.04%   | 99.17%          | 68.41%      | 100.00%                | 99.99%                  | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |
| system-O2-generic                      | 100.00%  | 100.00%         | 100.00%     | 100.00%                | 100.00%                 | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |
| pgo-lto-bootstrap-O2-native-no-plugin  | 104.86%  | 98.33%          | 163.41%     | 109.45%                | 105.45%                 | 88.04%               | 100.00%                | 87.61%                   | 100.00%                      |
| pgo-lto-bootstrap-O2-native            | 107.09%  | 100.00%         | 203.44%     | 111.63%                | 106.36%                 | 102.72%              | 100.00%                | 87.91%                   | 100.00%                      |
| pgo-lto-bootstrap-O2-generic-no-plugin | 105.11%  | 98.33%          | 163.41%     | 110.25%                | 105.64%                 | 89.67%               | 100.00%                | 87.61%                   | 100.00%                      |
| pgo-lto-bootstrap-O2-generic           | 107.27%  | 100.00%         | 203.44%     | 112.43%                | 106.49%                 | 103.80%              | 100.00%                | 87.91%                   | 100.00%                      |
| pgo-bootstrap-O2-generic               | 113.41%  | 100.00%         | 112.42%     | 114.68%                | 114.36%                 | 107.07%              | 100.00%                | 91.49%                   | 100.00%                      |
| lto-bootstrap-O2-generic-no-plugin     | 103.61%  | 98.33%          | 164.89%     | 100.73%                | 104.43%                 | 90.76%               | 100.00%                | 98.21%                   | 100.00%                      |
| lto-bootstrap-O2-generic               | 105.87%  | 100.00%         | 204.18%     | 103.20%                | 105.35%                 | 104.89%              | 100.00%                | 99.85%                   | 100.00%                      |
| bootstrap-O2-generic                   | 108.62%  | 100.00%         | 107.77%     | 101.09%                | 109.73%                 | 108.15%              | 100.00%                | 100.00%                  | 100.00%                      |

| cc1plus stripped                       | elf (MB) | elf/relocations | elf/symbols | elf/sections/text (MB) | elf/sections/debug (MB) | elf/sections/eh (MB) | elf/sections/data (MB) | elf/sections/rodata (MB) | elf/sections/relocation (MB) |
|--|----------|-----------------|-------------|------------------------|-------------------------|----------------------|------------------------|--------------------------|------------------------------|
| system-O2-native                       | 24.09    | 480             | 21188       | 13.76                  | 0                       | 1.84                 | 0.05                   | 6.7                      | 0.02                         |
| system-O2-generic-no-plugin            | 22.4     | 476             | 490         | 13.76                  | 0                       | 1.84                 | 0.05                   | 6.7                      | 0.02                         |
| system-O2-generic                      | 24.09    | 480             | 21188       | 13.76                  | 0                       | 1.84                 | 0.05                   | 6.7                      | 0.02                         |
| pgo-lto-bootstrap-O2-native-no-plugin  | 22.65    | 472             | 485         | 15.06                  | 0                       | 1.62                 | 0.05                   | 5.87                     | 0.02                         |
| pgo-lto-bootstrap-O2-native            | 24.77    | 480             | 19880       | 15.36                  | 0                       | 1.89                 | 0.05                   | 5.89                     | 0.02                         |
| pgo-lto-bootstrap-O2-generic-no-plugin | 22.79    | 472             | 485         | 15.17                  | 0                       | 1.65                 | 0.05                   | 5.87                     | 0.02                         |
| pgo-lto-bootstrap-O2-generic           | 24.91    | 480             | 19880       | 15.47                  | 0                       | 1.91                 | 0.05                   | 5.89                     | 0.02                         |
| pgo-bootstrap-O2-generic               | 25.72    | 480             | 21703       | 15.78                  | 0                       | 1.97                 | 0.05                   | 6.13                     | 0.02                         |
| lto-bootstrap-O2-generic-no-plugin     | 22.22    | 472             | 485         | 13.86                  | 0                       | 1.67                 | 0.05                   | 6.58                     | 0.02                         |
| lto-bootstrap-O2-generic               | 24.46    | 480             | 19880       | 14.2                   | 0                       | 1.93                 | 0.05                   | 6.69                     | 0.02                         |
| bootstrap-O2-generic                   | 24.38    | 480             | 21192       | 13.91                  | 0                       | 1.99                 | 0.05                   | 6.7                      | 0.02                         |

| cc1plus stripped                       | elf (MB) | elf/relocations | elf/symbols | elf/sections/text (MB) | elf/sections/debug (MB) | elf/sections/eh (MB) | elf/sections/data (MB) | elf/sections/rodata (MB) | elf/sections/relocation (MB) |
|--|----------|-----------------|-------------|------------------------|-------------------------|----------------------|------------------------|--------------------------|------------------------------|
| system-O2-native                       | 100.00%  | 100.00%         | 100.00%     | 100.00%                |                         | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |
| system-O2-generic-no-plugin            | 92.98%   | 99.17%          | 2.31%       | 100.00%                |                         | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |
| system-O2-generic                      | 100.00%  | 100.00%         | 100.00%     | 100.00%                |                         | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |
| pgo-lto-bootstrap-O2-native-no-plugin  | 94.02%   | 98.33%          | 2.29%       | 109.45%                |                         | 88.04%               | 100.00%                | 87.61%                   | 100.00%                      |
| pgo-lto-bootstrap-O2-native            | 102.82%  | 100.00%         | 93.83%      | 111.63%                |                         | 102.72%              | 100.00%                | 87.91%                   | 100.00%                      |
| pgo-lto-bootstrap-O2-generic-no-plugin | 94.60%   | 98.33%          | 2.29%       | 110.25%                |                         | 89.67%               | 100.00%                | 87.61%                   | 100.00%                      |
| pgo-lto-bootstrap-O2-generic           | 103.40%  | 100.00%         | 93.83%      | 112.43%                |                         | 103.80%              | 100.00%                | 87.91%                   | 100.00%                      |
| pgo-bootstrap-O2-generic               | 106.77%  | 100.00%         | 102.43%     | 114.68%                |                         | 107.07%              | 100.00%                | 91.49%                   | 100.00%                      |
| lto-bootstrap-O2-generic-no-plugin     | 92.24%   | 98.33%          | 2.29%       | 100.73%                |                         | 90.76%               | 100.00%                | 98.21%                   | 100.00%                      |
| lto-bootstrap-O2-generic               | 101.54%  | 100.00%         | 93.83%      | 103.20%                |                         | 104.89%              | 100.00%                | 99.85%                   | 100.00%                      |
| bootstrap-O2-generic                   | 101.20%  | 100.00%         | 100.02%     | 101.09%                |                         | 108.15%              | 100.00%                | 100.00%                  | 100.00%                      |

## GCC 8 – speed

|  | empty.c-100x | empty.C-100x | tramp3d-v4.ii -O2 -g-5x | i386.ii-5x | i386.ii -O2-5x | i386.ii -O2 -g-5x | insn-emit.ii -O2-5x | generic-match.ii -O2-5x | gimple-match.ii -O2-5x |
|--|--------------|--------------|-------------------------|------------|----------------|-------------------|---------------------|-------------------------|------------------------|
| GCC 7.3.0 package                      | 0.0112357    | 0.01148839   | 24.7543508              | 3.1470844  | 11.4658484     | 14.1282804        | 15.6745942          | 9.6547244               | 20.9718704             |
| bootstrap-O2-generic                   | 0.01079962   | 0.01149779   | 28.166114               | 3.6624232  | 14.074702      | 17.627713         | 18.3550608          | 12.2190138              | 24.9253428             |
| lto-bootstrap-O2-generic               | 0.0115318    | 0.01143266   | 28.4015112              | 3.7258686  | 14.2674926     | 17.7058472        | 18.5002996          | 12.3210418              | 25.0182174             |
| lto-bootstrap-O2-generic-no-plugin     | 0.01073283   | 0.01164981   | 28.0554908              | 3.6706096  | 14.1877298     | 17.6102206        | 18.3582006          | 12.2723738              | 24.9343024             |
| pgo-bootstrap-O2-generic               | 0.01070917   | 0.01087877   | 25.9722312              | 3.1931584  | 12.6808522     | 16.0427992        | 16.3093056          | 10.8956808              | 22.5882834             |
| pgo-lto-bootstrap-O2-generic           | 0.01029745   | 0.01043736   | 25.3036664              | 3.0604888  | 12.1961316     | 15.5275584        | 15.677464           | 10.5105886              | 21.8489434             |
| pgo-lto-bootstrap-O2-generic-no-plugin | 0.01053281   | 0.01129277   | 25.2565964              | 3.066628   | 12.190899      | 15.5455762        | 15.7026656          | 10.5013514              | 21.8114826             |
| pgo-lto-bootstrap-O2-native            | 0.01025825   | 0.01046231   | 25.610633               | 3.0671248  | 12.4080416     | 15.7849794        | 15.7432918          | 10.633747               | 22.0583766             |
| pgo-lto-bootstrap-O2-native-no-plugin  | 0.01014467   | 0.01040283   | 25.7759584              | 3.0936912  | 12.4688618     | 15.8205816        | 15.8309826          | 10.6825452              | 22.148033              |
| system-O2-generic                      | 0.01081952   | 0.01113544   | 28.282295               | 3.7192374  | 14.0938046     | 17.7078582        | 18.4627042          | 12.2049528              | 24.8376098             |
| system-O2-generic-no-plugin            | 0.01154469   | 0.01103822   | 28.5857454              | 3.6924814  | 14.1614742     | 17.6707538        | 18.49893            | 12.2418884              | 24.9762626             |
| system-O2-native                       | 0.01091069   | 0.01172589   | 28.4344734              | 3.6987138  | 14.1347326     | 17.7455434        | 18.5029216          | 12.2196088              | 24.9357146             |

|  | empty.c-100x | empty.C-100x | tramp3d-v4.ii -O2 -g-5x | i386.ii-5x | i386.ii -O2-5x | i386.ii -O2 -g-5x | insn-emit.ii -O2-5x | generic-match.ii -O2-5x | gimple-match.ii -O2-5x | AVERAGE |
|--|--------------|--------------|-------------------------|------------|----------------|-------------------|---------------------|-------------------------|------------------------|---------|
| GCC 7.3.0 package                      | 100.00%      | 100.00%      | 100.00%                 | 100.00%    | 100.00%        | 100.00%           | 100.00%             | 100.00%                 | 100.00%                | 100.00% |
| bootstrap-O2-generic                   | 96.12%       | 100.08%      | 113.78%                 | 116.38%    | 122.75%        | 124.77%           | 117.10%             | 126.56%                 | 118.85%                | 115.15% |
| lto-bootstrap-O2-generic               | 102.64%      | 99.51%       | 114.73%                 | 118.39%    | 124.43%        | 125.32%           | 118.03%             | 127.62%                 | 119.29%                | 116.66% |
| lto-bootstrap-O2-generic-no-plugin     | 95.52%       | 101.41%      | 113.34%                 | 116.64%    | 123.74%        | 124.65%           | 117.12%             | 127.11%                 | 118.89%                | 115.38% |
| pgo-bootstrap-O2-generic               | 95.31%       | 94.69%       | 104.92%                 | 101.46%    | 110.60%        | 113.55%           | 104.05%             | 112.85%                 | 107.71%                | 105.02% |
| pgo-lto-bootstrap-O2-generic           | 91.65%       | 90.85%       | 102.22%                 | 97.25%     | 106.37%        | 109.90%           | 100.02%             | 108.86%                 | 104.18%                | 101.26% |
| pgo-lto-bootstrap-O2-generic-no-plugin | 93.74%       | 98.30%       | 102.03%                 | 97.44%     | 106.32%        | 110.03%           | 100.18%             | 108.77%                 | 104.00%                | 102.31% |
| pgo-lto-bootstrap-O2-native            | 91.30%       | 91.07%       | 103.46%                 | 97.46%     | 108.22%        | 111.73%           | 100.44%             | 110.14%                 | 105.18%                | 102.11% |
| pgo-lto-bootstrap-O2-native-no-plugin  | 90.29%       | 90.55%       | 104.13%                 | 98.30%     | 108.75%        | 111.98%           | 101.00%             | 110.65%                 | 105.61%                | 102.36% |
| system-O2-generic                      | 96.30%       | 96.93%       | 114.25%                 | 118.18%    | 122.92%        | 125.34%           | 117.79%             | 126.41%                 | 118.43%                | 115.17% |
| system-O2-generic-no-plugin            | 102.75%      | 96.08%       | 115.48%                 | 117.33%    | 123.51%        | 125.07%           | 118.02%             | 126.80%                 | 119.09%                | 116.01% |
| system-O2-native                       | 97.11%       | 102.07%      | 114.87%                 | 117.53%    | 123.28%        | 125.60%           | 118.04%             | 126.57%                 | 118.90%                | 116.00% |

## GCC 7 – size

| cc1                                    | elf (MB) | elf/relocations | elf/symbols | elf/sections/text (MB) | elf/sections/debug (MB) | elf/sections/eh (MB) | elf/sections/data (MB) | elf/sections/rodata (MB) | elf/sections/relocation (MB) |
|--|----------|-----------------|-------------|------------------------|-------------------------|----------------------|------------------------|--------------------------|------------------------------|
| system-O2-native                       | 147.01   | 475             | 58152       | 11.84                  | 123.08                  | 1.61                 | 0.04                   | 6.32                     | 0.02                         |
| system-O2-generic-no-plugin            | 145.51   | 472             | 39963       | 11.84                  | 123.07                  | 1.61                 | 0.04                   | 6.32                     | 0.02                         |
| system-O2-generic                      | 147.01   | 475             | 58152       | 11.84                  | 123.08                  | 1.61                 | 0.04                   | 6.32                     | 0.02                         |
| pgo-lto-bootstrap-O2-native-no-plugin  | 132.46   | 466             | 40182       | 13.79                  | 109.43                  | 1.43                 | 0.04                   | 3.76                     | 1.06                         |
| pgo-lto-bootstrap-O2-native            | 135.53   | 492             | 62918       | 14.18                  | 110.1                   | 1.71                 | 0.04                   | 3.77                     | 1.06                         |
| pgo-lto-bootstrap-O2-generic-no-plugin | 132.31   | 466             | 40153       | 13.7                   | 109.4                   | 1.46                 | 0.04                   | 3.7                      | 1.06                         |
| pgo-lto-bootstrap-O2-generic           | 135.34   | 492             | 62865       | 14.08                  | 110.07                  | 1.72                 | 0.04                   | 3.71                     | 1.06                         |
| pgo-bootstrap-O2-generic               | 155.15   | 475             | 65168       | 13.87                  | 129.57                  | 1.73                 | 0.04                   | 5.29                     | 0.02                         |
| lto-bootstrap-O2-generic-no-plugin     | 113.73   | 466             | 33621       | 12.02                  | 92.7                    | 1.35                 | 0.04                   | 4.2                      | 1.06                         |
| lto-bootstrap-O2-generic               | 116.24   | 479             | 55790       | 12.62                  | 92.63                   | 1.62                 | 0.04                   | 4.26                     | 1.06                         |
| bootstrap-O2-generic                   | 147.77   | 475             | 58151       | 11.84                  | 123.85                  | 1.61                 | 0.04                   | 6.32                     | 0.02                         |

| cc1                                    | elf (MB) | elf/relocations | elf/symbols | elf/sections/text (MB) | elf/sections/debug (MB) | elf/sections/eh (MB) | elf/sections/data (MB) | elf/sections/rodata (MB) | elf/sections/relocation (MB) |
|--|----------|-----------------|-------------|------------------------|-------------------------|----------------------|------------------------|--------------------------|------------------------------|
| system-O2-native                       | 100.00%  | 100.00%         | 100.00%     | 100.00%                | 100.00%                 | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |
| system-O2-generic-no-plugin            | 98.98%   | 99.37%          | 68.72%      | 100.00%                | 99.99%                  | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |
| system-O2-generic                      | 100.00%  | 100.00%         | 100.00%     | 100.00%                | 100.00%                 | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |
| pgo-lto-bootstrap-O2-native-no-plugin  | 90.10%   | 98.11%          | 69.10%      | 116.47%                | 88.91%                  | 88.82%               | 100.00%                | 59.49%                   | 5300.00%                     |
| pgo-lto-bootstrap-O2-native            | 92.19%   | 103.58%         | 108.20%     | 119.76%                | 89.45%                  | 106.21%              | 100.00%                | 59.65%                   | 5300.00%                     |
| pgo-lto-bootstrap-O2-generic-no-plugin | 90.00%   | 98.11%          | 69.05%      | 115.71%                | 88.89%                  | 90.68%               | 100.00%                | 58.54%                   | 5300.00%                     |
| pgo-lto-bootstrap-O2-generic           | 92.06%   | 103.58%         | 108.10%     | 118.92%                | 89.43%                  | 106.83%              | 100.00%                | 58.70%                   | 5300.00%                     |
| pgo-bootstrap-O2-generic               | 105.54%  | 100.00%         | 112.06%     | 117.15%                | 105.27%                 | 107.45%              | 100.00%                | 83.70%                   | 100.00%                      |
| lto-bootstrap-O2-generic-no-plugin     | 77.36%   | 98.11%          | 57.82%      | 101.52%                | 75.32%                  | 83.85%               | 100.00%                | 66.46%                   | 5300.00%                     |
| lto-bootstrap-O2-generic               | 79.07%   | 100.84%         | 95.94%      | 106.59%                | 75.26%                  | 100.62%              | 100.00%                | 67.41%                   | 5300.00%                     |
| bootstrap-O2-generic                   | 100.52%  | 100.00%         | 100.00%     | 100.00%                | 100.63%                 | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |

| cc1 stripped                           | elf (MB) | elf/relocations | elf/symbols | elf/sections/text (MB) | elf/sections/debug (MB) | elf/sections/eh (MB) | elf/sections/data (MB) | elf/sections/rodata (MB) | elf/sections/relocation (MB) |
|--|----------|-----------------|-------------|------------------------|-------------------------|----------------------|------------------------|--------------------------|------------------------------|
| system-O2-native                       | 21.37    | 475             | 18665       | 11.84                  | 0                       | 1.61                 | 0.04                   | 6.32                     | 0.02                         |
| system-O2-generic-no-plugin            | 19.87    | 472             | 486         | 11.84                  | 0                       | 1.61                 | 0.04                   | 6.32                     | 0.02                         |
| system-O2-generic                      | 21.37    | 475             | 18665       | 11.84                  | 0                       | 1.61                 | 0.04                   | 6.32                     | 0.02                         |
| pgo-lto-bootstrap-O2-native-no-plugin  | 20.11    | 466             | 479         | 13.79                  | 0                       | 1.43                 | 0.04                   | 3.76                     | 1.06                         |
| pgo-lto-bootstrap-O2-native            | 22.16    | 492             | 17565       | 14.18                  | 0                       | 1.71                 | 0.04                   | 3.77                     | 1.06                         |
| pgo-lto-bootstrap-O2-generic-no-plugin | 20       | 466             | 479         | 13.7                   | 0                       | 1.46                 | 0.04                   | 3.7                      | 1.06                         |
| pgo-lto-bootstrap-O2-generic           | 22.01    | 492             | 17565       | 14.08                  | 0                       | 1.72                 | 0.04                   | 3.71                     | 1.06                         |
| pgo-bootstrap-O2-generic               | 22.52    | 475             | 19102       | 13.87                  | 0                       | 1.73                 | 0.04                   | 5.29                     | 0.02                         |
| lto-bootstrap-O2-generic-no-plugin     | 18.71    | 466             | 479         | 12.02                  | 0                       | 1.35                 | 0.04                   | 4.2                      | 1.06                         |
| lto-bootstrap-O2-generic               | 21.01    | 479             | 17565       | 12.62                  | 0                       | 1.62                 | 0.04                   | 4.26                     | 1.06                         |
| bootstrap-O2-generic                   | 21.37    | 475             | 18665       | 11.84                  | 0                       | 1.61                 | 0.04                   | 6.32                     | 0.02                         |

| cc1 stripped                           | elf (MB) | elf/relocations | elf/symbols | elf/sections/text (MB) | elf/sections/debug (MB) | elf/sections/eh (MB) | elf/sections/data (MB) | elf/sections/rodata (MB) | elf/sections/relocation (MB) |
|--|----------|-----------------|-------------|------------------------|-------------------------|----------------------|------------------------|--------------------------|------------------------------|
| system-O2-native                       | 100.00%  | 100.00%         | 100.00%     | 100.00%                |                         | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |
| system-O2-generic-no-plugin            | 92.98%   | 99.37%          | 2.60%       | 100.00%                |                         | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |
| system-O2-generic                      | 100.00%  | 100.00%         | 100.00%     | 100.00%                |                         | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |
| pgo-lto-bootstrap-O2-native-no-plugin  | 94.10%   | 98.11%          | 2.57%       | 116.47%                |                         | 88.82%               | 100.00%                | 59.49%                   | 5300.00%                     |
| pgo-lto-bootstrap-O2-native            | 103.70%  | 103.58%         | 94.11%      | 119.76%                |                         | 106.21%              | 100.00%                | 59.65%                   | 5300.00%                     |
| pgo-lto-bootstrap-O2-generic-no-plugin | 93.59%   | 98.11%          | 2.57%       | 115.71%                |                         | 90.68%               | 100.00%                | 58.54%                   | 5300.00%                     |
| pgo-lto-bootstrap-O2-generic           | 102.99%  | 103.58%         | 94.11%      | 118.92%                |                         | 106.83%              | 100.00%                | 58.70%                   | 5300.00%                     |
| pgo-bootstrap-O2-generic               | 105.38%  | 100.00%         | 102.34%     | 117.15%                |                         | 107.45%              | 100.00%                | 83.70%                   | 100.00%                      |
| lto-bootstrap-O2-generic-no-plugin     | 87.55%   | 98.11%          | 2.57%       | 101.52%                |                         | 83.85%               | 100.00%                | 66.46%                   | 5300.00%                     |
| lto-bootstrap-O2-generic               | 98.32%   | 100.84%         | 94.11%      | 106.59%                |                         | 100.62%              | 100.00%                | 67.41%                   | 5300.00%                     |
| bootstrap-O2-generic                   | 100.00%  | 100.00%         | 100.00%     | 100.00%                |                         | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |

| cc1plus                               | elf (MB) | elf/relocations | elf/symbols | elf/sections/text (MB) | elf/sections/debug (MB) | elf/sections/eh (MB) | elf/sections/data (MB) | elf/sections/rodata (MB) | elf/sections/relocation (MB) |
|---------------------------------------|----------|-----------------|-------------|------------------------|-------------------------|----------------------|------------------------|--------------------------|------------------------------|
| system-O2-native                      | 156.3    | 476             | 62514       | 12.75                  | 130.89                  | 1.74                 | 0.04                   | 6.48                     | 0.02                         |
| system-O2-generic-no-plugin           | 154.69   | 473             | 42883       | 12.74                  | 130.88                  | 1.74                 | 0.04                   | 6.48                     | 0.02                         |
| system-O2-generic                     | 156.3    | 476             | 62514       | 12.75                  | 130.89                  | 1.74                 | 0.04                   | 6.48                     | 0.02                         |
| pgo-lto-bootstrap-O2-native-no-plugin | 143.21   | 469             | 43355       | 15.01                  | 118.45                  | 1.55                 | 0.04                   | 3.88                     | 1.06                         |
| pgo-lto-bootstrap-O2-native           | 145.93   | 493             | 68151       | 15.38                  | 118.64                  | 1.86                 | 0.04                   | 3.89                     | 1.07                         |



|  |        |     |       |       |        |      |      |      |      |
|--|--------|-----|-------|-------|--------|------|------|------|------|
| pgo-lto-bootstrap-O2-generic-no-plugin | 143.11 | 469 | 43357 | 14.95 | 118.45 | 1.58 | 0.04 | 3.82 | 1.06 |
| pgo-lto-bootstrap-O2-generic           | 146.29 | 493 | 68122 | 15.32 | 119.1  | 1.87 | 0.04 | 3.84 | 1.07 |
| pgo-bootstrap-O2-generic               | 166.07 | 476 | 70626 | 15.13 | 138.52 | 1.88 | 0.04 | 5.48 | 0.02 |
| lto-bootstrap-O2-generic-no-plugin     | 120.81 | 469 | 36052 | 12.94 | 98.45  | 1.46 | 0.04 | 4.33 | 1.06 |
| lto-bootstrap-O2-generic               | 123.51 | 480 | 60061 | 13.57 | 98.4   | 1.75 | 0.04 | 4.39 | 1.07 |
| bootstrap-O2-generic                   | 157.1  | 476 | 62513 | 12.74 | 131.69 | 1.74 | 0.04 | 6.48 | 0.02 |

| cc1plus                                | elf (MB) | elf/relocations | elf/symbols | elf/sections/text (MB) | elf/sections/debug (MB) | elf/sections/eh (MB) | elf/sections/data (MB) | elf/sections/rodata (MB) | elf/sections/relocation (MB) |
|--|----------|-----------------|-------------|------------------------|-------------------------|----------------------|------------------------|--------------------------|------------------------------|
| system-O2-native                       | 100.00%  | 100.00%         | 100.00%     | 100.00%                | 100.00%                 | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |
| system-O2-generic-no-plugin            | 98.97%   | 99.37%          | 68.60%      | 99.92%                 | 99.99%                  | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |
| system-O2-generic                      | 100.00%  | 100.00%         | 100.00%     | 100.00%                | 100.00%                 | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |
| pgo-lto-bootstrap-O2-native-no-plugin  | 91.63%   | 98.53%          | 69.35%      | 117.73%                | 90.50%                  | 89.08%               | 100.00%                | 59.88%                   | 5300.00%                     |
| pgo-lto-bootstrap-O2-native            | 93.37%   | 103.57%         | 109.02%     | 120.63%                | 90.64%                  | 106.90%              | 100.00%                | 60.03%                   | 5350.00%                     |
| pgo-lto-bootstrap-O2-generic-no-plugin | 91.56%   | 98.53%          | 69.36%      | 117.25%                | 90.50%                  | 90.80%               | 100.00%                | 58.95%                   | 5300.00%                     |
| pgo-lto-bootstrap-O2-generic           | 93.60%   | 103.57%         | 108.97%     | 120.16%                | 90.99%                  | 107.47%              | 100.00%                | 59.26%                   | 5350.00%                     |
| pgo-bootstrap-O2-generic               | 106.25%  | 100.00%         | 112.98%     | 118.67%                | 105.83%                 | 108.05%              | 100.00%                | 84.57%                   | 100.00%                      |
| lto-bootstrap-O2-generic-no-plugin     | 77.29%   | 98.53%          | 57.67%      | 101.49%                | 75.22%                  | 83.91%               | 100.00%                | 66.82%                   | 5300.00%                     |
| lto-bootstrap-O2-generic               | 79.02%   | 100.84%         | 96.08%      | 106.43%                | 75.18%                  | 100.57%              | 100.00%                | 67.75%                   | 5350.00%                     |
| bootstrap-O2-generic                   | 100.51%  | 100.00%         | 100.00%     | 99.92%                 | 100.61%                 | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |

| cc1plus stripped                       | elf (MB) | elf/relocations | elf/symbols | elf/sections/text (MB) | elf/sections/debug (MB) | elf/sections/eh (MB) | elf/sections/data (MB) | elf/sections/rodata (MB) | elf/sections/relocation (MB) |
|--|----------|-----------------|-------------|------------------------|-------------------------|----------------------|------------------------|--------------------------|------------------------------|
| system-O2-native                       | 22.65    | 476             | 20108       | 12.75                  | 0                       | 1.74                 | 0.04                   | 6.48                     | 0.02                         |
| system-O2-generic-no-plugin            | 21.06    | 473             | 487         | 12.74                  | 0                       | 1.74                 | 0.04                   | 6.48                     | 0.02                         |
| system-O2-generic                      | 22.65    | 476             | 20108       | 12.75                  | 0                       | 1.74                 | 0.04                   | 6.48                     | 0.02                         |
| pgo-lto-bootstrap-O2-native-no-plugin  | 21.59    | 469             | 482         | 15.01                  | 0                       | 1.55                 | 0.04                   | 3.88                     | 1.06                         |
| pgo-lto-bootstrap-O2-native            | 23.74    | 493             | 18976       | 15.38                  | 0                       | 1.86                 | 0.04                   | 3.89                     | 1.07                         |
| pgo-lto-bootstrap-O2-generic-no-plugin | 21.5     | 469             | 482         | 14.95                  | 0                       | 1.58                 | 0.04                   | 3.82                     | 1.06                         |
| pgo-lto-bootstrap-O2-generic           | 23.64    | 493             | 18976       | 15.32                  | 0                       | 1.87                 | 0.04                   | 3.84                     | 1.07                         |
| pgo-bootstrap-O2-generic               | 24.22    | 476             | 20572       | 15.13                  | 0                       | 1.88                 | 0.04                   | 5.48                     | 0.02                         |
| lto-bootstrap-O2-generic-no-plugin     | 19.87    | 469             | 482         | 12.94                  | 0                       | 1.46                 | 0.04                   | 4.33                     | 1.06                         |
| lto-bootstrap-O2-generic               | 22.31    | 480             | 18976       | 13.57                  | 0                       | 1.75                 | 0.04                   | 4.39                     | 1.07                         |
| bootstrap-O2-generic                   | 22.65    | 476             | 20108       | 12.74                  | 0                       | 1.74                 | 0.04                   | 6.48                     | 0.02                         |

| cc1plus stripped                       | elf (MB) | elf/relocations | elf/symbols | elf/sections/text (MB) | elf/sections/debug (MB) | elf/sections/eh (MB) | elf/sections/data (MB) | elf/sections/rodata (MB) | elf/sections/relocation (MB) |
|--|----------|-----------------|-------------|------------------------|-------------------------|----------------------|------------------------|--------------------------|------------------------------|
| system-O2-native                       | 100.00%  | 100.00%         | 100.00%     | 100.00%                |                         | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |
| system-O2-generic-no-plugin            | 92.98%   | 99.37%          | 2.42%       | 99.92%                 |                         | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |
| system-O2-generic                      | 100.00%  | 100.00%         | 100.00%     | 100.00%                |                         | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |
| pgo-lto-bootstrap-O2-native-no-plugin  | 95.32%   | 98.53%          | 2.40%       | 117.73%                |                         | 89.08%               | 100.00%                | 59.88%                   | 5300.00%                     |
| pgo-lto-bootstrap-O2-native            | 104.81%  | 103.57%         | 94.37%      | 120.63%                |                         | 106.90%              | 100.00%                | 60.03%                   | 5350.00%                     |
| pgo-lto-bootstrap-O2-generic-no-plugin | 94.92%   | 98.53%          | 2.40%       | 117.25%                |                         | 90.80%               | 100.00%                | 58.95%                   | 5300.00%                     |
| pgo-lto-bootstrap-O2-generic           | 104.37%  | 103.57%         | 94.37%      | 120.16%                |                         | 107.47%              | 100.00%                | 59.26%                   | 5350.00%                     |
| pgo-bootstrap-O2-generic               | 106.93%  | 100.00%         | 102.31%     | 118.67%                |                         | 108.05%              | 100.00%                | 84.57%                   | 100.00%                      |
| lto-bootstrap-O2-generic-no-plugin     | 87.73%   | 98.53%          | 2.40%       | 101.49%                |                         | 83.91%               | 100.00%                | 66.82%                   | 5300.00%                     |
| lto-bootstrap-O2-generic               | 98.50%   | 100.84%         | 94.37%      | 106.43%                |                         | 100.57%              | 100.00%                | 67.75%                   | 5350.00%                     |
| bootstrap-O2-generic                   | 100.00%  | 100.00%         | 100.00%     | 99.92%                 |                         | 100.00%              | 100.00%                | 100.00%                  | 100.00%                      |

## GCC 7 – speed

|  | empty.c-100x | empty.C-100x | tramp3d-v4.ii -O2 -g-5x | i386.ii-5x | i386.ii -O2-5x | i386.ii -O2 -g-5x | insn-emit.ii -O2-5x | generic-match.ii -O2-5x | gimple-match.ii -O2-5x |
|--|--------------|--------------|-------------------------|------------|----------------|-------------------|---------------------|-------------------------|------------------------|
| GCC 7.3.0 package                      | 0.01051314   | 0.01136587   | 24.6305148              | 3.1266658  | 11.4956322     | 14.0819922        | 15.582557           | 9.5542042               | 20.882038              |
| bootstrap-O2-generic                   | 0.01069764   | 0.01129646   | 26.3115236              | 3.582584   | 12.5253808     | 15.1728414        | 17.2808606          | 10.5677852              | 22.6039058             |
| lto-bootstrap-O2-generic               | 0.01030739   | 0.01169601   | 27.0357298              | 3.6565892  | 12.7908398     | 15.5003952        | 17.6750774          | 10.7819442              | 22.9506644             |
| lto-bootstrap-O2-generic-no-plugin     | 0.010433     | 0.01071628   | 26.7208076              | 3.5908778  | 12.64023       | 15.2836048        | 17.3819012          | 10.6346896              | 22.7239146             |
| pgo-bootstrap-O2-generic               | 0.01060311   | 0.01067778   | 25.0727128              | 3.0997666  | 11.477261      | 14.0093072        | 15.4398308          | 9.5103608               | 20.8500778             |
| pgo-lto-bootstrap-O2-generic           | 0.01034327   | 0.01049496   | 26.1758394              | 3.2296984  | 11.8700502     | 14.475056         | 16.1399782          | 9.8285434               | 21.4160712             |
| pgo-lto-bootstrap-O2-generic-no-plugin | 0.01016377   | 0.01072821   | 25.4679556              | 3.063584   | 11.2704452     | 13.7607252        | 15.2006938          | 9.3829418               | 20.463041              |
| pgo-lto-bootstrap-O2-native            | 0.01019504   | 0.01038209   | 25.5853726              | 3.19854    | 11.8373866     | 14.4315888        | 15.9624476          | 9.9008726               | 21.430638              |
| pgo-lto-bootstrap-O2-native-no-plugin  | 0.01079724   | 0.01019077   | 25.3136214              | 3.0440676  | 11.1994046     | 13.6741122        | 15.0679566          | 9.428948                | 20.3783794             |
| system-O2-generic                      | 0.01161027   | 0.01099082   | 26.8745384              | 3.5703712  | 12.4996418     | 15.1343302        | 17.2307564          | 10.6367484              | 22.4224152             |
| system-O2-generic-no-plugin            | 0.01100563   | 0.01083739   | 27.0475586              | 3.5400198  | 12.4402028     | 14.9656438        | 17.1015348          | 10.5653328              | 22.3336702             |
| system-O2-native                       | 0.01119548   | 0.01130184   | 26.8072366              | 3.5630546  | 12.4958216     | 15.1177104        | 17.2480664          | 10.6249                 | 22.417594              |

|  | empty.c-100x | empty.C-100x | tramp3d-v4.ii -O2 -g-5x | i386.ii-5x | i386.ii -O2-5x | i386.ii -O2 -g-5x | insn-emit.ii -O2-5x | generic-match.ii -O2-5x | gimple-match.ii -O2-5x | AVERAGE |
|--|--------------|--------------|-------------------------|------------|----------------|-------------------|---------------------|-------------------------|------------------------|---------|
| GCC 7.3.0 package                      | 100.00%      | 100.00%      | 100.00%                 | 100.00%    | 100.00%        | 100.00%           | 100.00%             | 100.00%                 | 100.00%                | 100.00% |
| bootstrap-O2-generic                   | 101.75%      | 99.39%       | 106.82%                 | 114.58%    | 108.96%        | 107.75%           | 110.90%             | 110.61%                 | 108.25%                | 107.67% |
| lto-bootstrap-O2-generic               | 98.04%       | 102.90%      | 109.77%                 | 116.95%    | 111.27%        | 110.07%           | 113.43%             | 112.85%                 | 109.91%                | 109.47% |
| lto-bootstrap-O2-generic-no-plugin     | 99.24%       | 94.28%       | 108.49%                 | 114.85%    | 109.96%        | 108.53%           | 111.55%             | 111.31%                 | 108.82%                | 107.45% |
| pgo-bootstrap-O2-generic               | 100.86%      | 93.95%       | 101.80%                 | 99.14%     | 99.84%         | 99.48%            | 99.08%              | 99.54%                  | 99.85%                 | 99.28%  |
| pgo-lto-bootstrap-O2-generic           | 98.38%       | 92.34%       | 106.27%                 | 103.30%    | 103.26%        | 102.79%           | 103.58%             | 102.87%                 | 102.56%                | 101.71% |
| pgo-lto-bootstrap-O2-generic-no-plugin | 96.68%       | 94.39%       | 103.40%                 | 97.98%     | 98.04%         | 97.72%            | 97.55%              | 98.21%                  | 97.99%                 | 98.00%  |
| pgo-lto-bootstrap-O2-native            | 96.97%       | 91.34%       | 103.88%                 | 102.30%    | 102.97%        | 102.48%           | 102.44%             | 103.63%                 | 102.63%                | 100.96% |
| pgo-lto-bootstrap-O2-native-no-plugin  | 102.70%      | 89.66%       | 102.77%                 | 97.36%     | 97.42%         | 97.10%            | 96.70%              | 98.69%                  | 97.59%                 | 97.78%  |
| system-O2-generic                      | 110.44%      | 96.70%       | 109.11%                 | 114.19%    | 108.73%        | 107.47%           | 110.58%             | 111.33%                 | 107.38%                | 108.44% |
| system-O2-generic-no-plugin            | 104.68%      | 95.35%       | 109.81%                 | 113.22%    | 108.22%        | 106.28%           | 109.75%             | 110.58%                 | 106.95%                | 107.20% |
| system-O2-native                       | 106.49%      | 99.44%       | 108.84%                 | 113.96%    | 108.70%        | 107.35%           | 110.69%             | 111.21%                 | 107.35%                | 108.23% |

# GCC 7&8 – size

cc1plus

| GCC 8                                  | elf (MB) | elf/relocations | elf/symbols | elf/sections/text (MB) | elf/sections/debug (MB) | elf/sections/eh (MB) | elf/sections/data (MB) | elf/sections/rodata (MB) | elf/sections/relocation (MB) |
|--|----------|-----------------|-------------|------------------------|-------------------------|----------------------|------------------------|--------------------------|------------------------------|
| system-O2-native                       | 175.16   | 480             | 65557       | 13.76                  | 148.17                  | 1.84                 | 0.05                   | 6.7                      | 0.02                         |
| system-O2-generic-no-plugin            | 173.47   | 476             | 44848       | 13.76                  | 148.16                  | 1.84                 | 0.05                   | 6.7                      | 0.02                         |
| system-O2-generic                      | 175.16   | 480             | 65557       | 13.76                  | 148.17                  | 1.84                 | 0.05                   | 6.7                      | 0.02                         |
| pgo-lto-bootstrap-O2-native-no-plugin  | 183.68   | 472             | 107125      | 15.06                  | 156.25                  | 1.62                 | 0.05                   | 5.87                     | 0.02                         |
| pgo-lto-bootstrap-O2-native            | 187.58   | 480             | 133367      | 15.36                  | 157.59                  | 1.89                 | 0.05                   | 5.89                     | 0.02                         |
| pgo-lto-bootstrap-O2-generic-no-plugin | 184.11   | 472             | 107129      | 15.17                  | 156.53                  | 1.65                 | 0.05                   | 5.87                     | 0.02                         |
| pgo-lto-bootstrap-O2-generic           | 187.9    | 480             | 133372      | 15.47                  | 157.78                  | 1.91                 | 0.05                   | 5.89                     | 0.02                         |
| pgo-bootstrap-O2-generic               | 198.65   | 480             | 73697       | 15.78                  | 169.45                  | 1.97                 | 0.05                   | 6.13                     | 0.02                         |
| lto-bootstrap-O2-generic-no-plugin     | 181.48   | 472             | 108099      | 13.86                  | 154.74                  | 1.67                 | 0.05                   | 6.58                     | 0.02                         |
| lto-bootstrap-O2-generic               | 185.45   | 480             | 133857      | 14.2                   | 156.1                   | 1.93                 | 0.05                   | 6.69                     | 0.02                         |
| bootstrap-O2-generic                   | 190.26   | 480             | 70651       | 13.91                  | 162.58                  | 1.99                 | 0.05                   | 6.7                      | 0.02                         |

| GCC 7                                  | elf (MB) | elf/relocations | elf/symbols | elf/sections/text (MB) | elf/sections/debug (MB) | elf/sections/eh (MB) | elf/sections/data (MB) | elf/sections/rodata (MB) | elf/sections/relocation (MB) |
|--|----------|-----------------|-------------|------------------------|-------------------------|----------------------|------------------------|--------------------------|------------------------------|
| system-O2-native                       | 156.3    | 476             | 62514       | 12.75                  | 130.89                  | 1.74                 | 0.04                   | 6.48                     | 0.02                         |
| system-O2-generic-no-plugin            | 154.69   | 473             | 42883       | 12.74                  | 130.88                  | 1.74                 | 0.04                   | 6.48                     | 0.02                         |
| system-O2-generic                      | 156.3    | 476             | 62514       | 12.75                  | 130.89                  | 1.74                 | 0.04                   | 6.48                     | 0.02                         |
| pgo-lto-bootstrap-O2-native-no-plugin  | 143.21   | 469             | 43355       | 15.01                  | 118.45                  | 1.55                 | 0.04                   | 3.88                     | 1.06                         |
| pgo-lto-bootstrap-O2-native            | 145.93   | 493             | 68151       | 15.38                  | 118.64                  | 1.86                 | 0.04                   | 3.89                     | 1.07                         |
| pgo-lto-bootstrap-O2-generic-no-plugin | 143.11   | 469             | 43357       | 14.95                  | 118.45                  | 1.58                 | 0.04                   | 3.82                     | 1.06                         |
| pgo-lto-bootstrap-O2-generic           | 146.29   | 493             | 68122       | 15.32                  | 119.1                   | 1.87                 | 0.04                   | 3.84                     | 1.07                         |
| pgo-bootstrap-O2-generic               | 166.07   | 476             | 70626       | 15.13                  | 138.52                  | 1.88                 | 0.04                   | 5.48                     | 0.02                         |
| lto-bootstrap-O2-generic-no-plugin     | 120.81   | 469             | 36052       | 12.94                  | 98.45                   | 1.46                 | 0.04                   | 4.33                     | 1.06                         |
| lto-bootstrap-O2-generic               | 123.51   | 480             | 60061       | 13.57                  | 98.4                    | 1.75                 | 0.04                   | 4.39                     | 1.07                         |
| bootstrap-O2-generic                   | 157.1    | 476             | 62513       | 12.74                  | 131.69                  | 1.74                 | 0.04                   | 6.48                     | 0.02                         |

| GCC 8                                  | elf (MB) | elf/relocations | elf/symbols | elf/sections/text (MB) | elf/sections/debug (MB) | elf/sections/eh (MB) | elf/sections/data (MB) | elf/sections/rodata (MB) | elf/sections/relocation (MB) |
|--|----------|-----------------|-------------|------------------------|-------------------------|----------------------|------------------------|--------------------------|------------------------------|
| system-O2-native                       | 105.47%  | 100.84%         | 92.82%      | 90.95%                 | 106.97%                 | 97.87%               | 125.00%                | 122.26%                  | 100.00%                      |
| system-O2-generic-no-plugin            | 104.46%  | 100.00%         | 63.50%      | 90.95%                 | 106.96%                 | 97.87%               | 125.00%                | 122.26%                  | 100.00%                      |
| system-O2-generic                      | 105.47%  | 100.84%         | 92.82%      | 90.95%                 | 106.97%                 | 97.87%               | 125.00%                | 122.26%                  | 100.00%                      |
| pgo-lto-bootstrap-O2-native-no-plugin  | 110.60%  | 99.16%          | 151.68%     | 99.54%                 | 112.80%                 | 86.17%               | 125.00%                | 107.12%                  | 100.00%                      |
| pgo-lto-bootstrap-O2-native            | 112.95%  | 100.84%         | 188.84%     | 101.52%                | 113.77%                 | 100.53%              | 125.00%                | 107.48%                  | 100.00%                      |
| pgo-lto-bootstrap-O2-generic-no-plugin | 110.86%  | 99.16%          | 151.68%     | 100.26%                | 113.00%                 | 87.77%               | 125.00%                | 107.12%                  | 100.00%                      |
| pgo-lto-bootstrap-O2-generic           | 113.15%  | 100.84%         | 188.84%     | 102.25%                | 113.90%                 | 101.60%              | 125.00%                | 107.48%                  | 100.00%                      |
| pgo-bootstrap-O2-generic               | 119.62%  | 100.84%         | 104.35%     | 104.30%                | 122.33%                 | 104.79%              | 125.00%                | 111.86%                  | 100.00%                      |
| lto-bootstrap-O2-generic-no-plugin     | 109.28%  | 99.16%          | 153.06%     | 91.61%                 | 111.71%                 | 88.83%               | 125.00%                | 120.07%                  | 100.00%                      |
| lto-bootstrap-O2-generic               | 111.67%  | 100.84%         | 189.53%     | 93.85%                 | 112.69%                 | 102.66%              | 125.00%                | 122.08%                  | 100.00%                      |
| bootstrap-O2-generic                   | 114.57%  | 100.84%         | 100.04%     | 91.94%                 | 117.37%                 | 105.85%              | 125.00%                | 122.26%                  | 100.00%                      |

| GCC 7                                  | elf (MB)       | elf/relocations | elf/symbols    | elf/sections/text (MB) | elf/sections/debug (MB) | elf/sections/eh (MB) | elf/sections/data (MB) | elf/sections/rodata (MB) | elf/sections/relocation (MB) |
|--|----------------|-----------------|----------------|------------------------|-------------------------|----------------------|------------------------|--------------------------|------------------------------|
| system-O2-native                       | 94.12%         | 100.00%         | 88.51%         | 84.27%                 | 94.49%                  | 92.55%               | 100.00%                | 118.25%                  | 100.00%                      |
| system-O2-generic-no-plugin            | 93.15%         | 99.37%          | 60.72%         | 84.20%                 | 94.48%                  | 92.55%               | 100.00%                | 118.25%                  | 100.00%                      |
| system-O2-generic                      | 94.12%         | 100.00%         | 88.51%         | 84.27%                 | 94.49%                  | 92.55%               | 100.00%                | 118.25%                  | 100.00%                      |
| pgo-lto-bootstrap-O2-native-no-plugin  | 86.23%         | 98.53%          | 61.39%         | 99.21%                 | 85.51%                  | 82.45%               | 100.00%                | 70.80%                   | 5300.00%                     |
| pgo-lto-bootstrap-O2-native            | 87.87%         | 103.57%         | 96.50%         | 101.65%                | 85.65%                  | 98.94%               | 100.00%                | 70.99%                   | 5350.00%                     |
| pgo-lto-bootstrap-O2-generic-no-plugin | 86.17%         | 98.53%          | 61.39%         | 98.81%                 | 85.51%                  | 84.04%               | 100.00%                | 69.71%                   | 5300.00%                     |
| pgo-lto-bootstrap-O2-generic           | 88.09%         | 103.57%         | 96.45%         | 101.26%                | 85.98%                  | 99.47%               | 100.00%                | 70.07%                   | 5350.00%                     |
| <b>pgo-bootstrap-O2-generic</b>        | <b>100.00%</b> | <b>100.00%</b>  | <b>100.00%</b> | <b>100.00%</b>         | <b>100.00%</b>          | <b>100.00%</b>       | <b>100.00%</b>         | <b>100.00%</b>           | <b>100.00%</b>               |
| lto-bootstrap-O2-generic-no-plugin     | 72.75%         | 98.53%          | 51.05%         | 85.53%                 | 71.07%                  | 77.66%               | 100.00%                | 79.01%                   | 5300.00%                     |
| lto-bootstrap-O2-generic               | 74.37%         | 100.84%         | 85.04%         | 89.69%                 | 71.04%                  | 93.09%               | 100.00%                | 80.11%                   | 5350.00%                     |
| bootstrap-O2-generic                   | 94.60%         | 100.00%         | 88.51%         | 84.20%                 | 95.07%                  | 92.55%               | 100.00%                | 118.25%                  | 100.00%                      |



# GCC 7&8 – speed

|  |                  |                   |                         |                  |                   |                   |                     |                         |                        |
|--|------------------|-------------------|-------------------------|------------------|-------------------|-------------------|---------------------|-------------------------|------------------------|
| GCC 8                                  | empty.c-100x     | empty.C-100x      | tramp3d-v4.ii -O2 -g-5x | i386.ii-5x       | i386.ii -O2-5x    | i386.ii -O2 -g-5x | insn-emit.ii -O2-5x | generic-match.ii -O2-5x | gimple-match.ii -O2-5x |
| <b>GCC 7.3.0 package</b>               | <b>0.0112357</b> | <b>0.01148839</b> | <b>24.7543508</b>       | <b>3.1470844</b> | <b>11.4658484</b> | <b>14.1282804</b> | <b>15.6745942</b>   | <b>9.6547244</b>        | <b>20.9718704</b>      |
| bootstrap-O2-generic                   | 0.01079962       | 0.01149779        | 28.166114               | 3.6624232        | 14.074702         | 17.627713         | 18.3550608          | 12.2190138              | 24.9253428             |
| lto-bootstrap-O2-generic               | 0.0115318        | 0.01143266        | 28.4015112              | 3.7258686        | 14.2674926        | 17.7058472        | 18.5002996          | 12.3210418              | 25.0182174             |
| lto-bootstrap-O2-generic-no-plugin     | 0.01073283       | 0.01164981        | 28.0554908              | 3.6706096        | 14.1877298        | 17.6102206        | 18.3582006          | 12.2723738              | 24.9343024             |
| pgo-bootstrap-O2-generic               | 0.01070917       | 0.01087877        | 25.9722312              | 3.1931584        | 12.6808522        | 16.0427992        | 16.3093056          | 10.8956808              | 22.5882834             |
| pgo-lto-bootstrap-O2-generic           | 0.01029745       | 0.01043736        | 25.3036664              | 3.0604888        | 12.1961316        | 15.5275584        | 15.677464           | 10.5105886              | 21.8489434             |
| pgo-lto-bootstrap-O2-generic-no-plugin | 0.01053281       | 0.01129277        | 25.2565964              | 3.066628         | 12.190899         | 15.5455762        | 15.7026656          | 10.5013514              | 21.8114826             |
| pgo-lto-bootstrap-O2-native            | 0.01025825       | 0.01046231        | 25.610633               | 3.0671248        | 12.4080416        | 15.7849794        | 15.7432918          | 10.633747               | 22.0583766             |
| pgo-lto-bootstrap-O2-native-no-plugin  | 0.01014467       | 0.01040283        | 25.7759584              | 3.0936912        | 12.4688618        | 15.8205816        | 15.8309826          | 10.6825452              | 22.148033              |
| system-O2-generic                      | 0.01081952       | 0.01113544        | 28.282295               | 3.7192374        | 14.0938046        | 17.7078582        | 18.4627042          | 12.2049528              | 24.8376098             |
| system-O2-generic-no-plugin            | 0.01154469       | 0.01103822        | 28.5857454              | 3.6924814        | 14.1614742        | 17.6707538        | 18.49893            | 12.2418884              | 24.9762626             |
| system-O2-native                       | 0.01091069       | 0.01172589        | 28.4344734              | 3.6987138        | 14.1347326        | 17.7455434        | 18.5029216          | 12.2196088              | 24.9357146             |

|  |              |              |                         |            |                |                   |                     |                         |                        |
|--|--------------|--------------|-------------------------|------------|----------------|-------------------|---------------------|-------------------------|------------------------|
| GCC 8                                  | empty.c-100x | empty.C-100x | tramp3d-v4.ii -O2 -g-5x | i386.ii-5x | i386.ii -O2-5x | i386.ii -O2 -g-5x | insn-emit.ii -O2-5x | generic-match.ii -O2-5x | gimple-match.ii -O2-5x |
| GCC 7.3.0 package                      | 0.01051314   | 0.01136587   | 24.6305148              | 3.1266658  | 11.4956322     | 14.0819922        | 15.582557           | 9.5542042               | 20.882038              |
| bootstrap-O2-generic                   | 0.01069764   | 0.01129646   | 26.3115236              | 3.582584   | 12.5253808     | 15.1728414        | 17.2808606          | 10.5677852              | 22.6039058             |
| lto-bootstrap-O2-generic               | 0.01030739   | 0.01169601   | 27.0357298              | 3.6565892  | 12.7908398     | 15.5003952        | 17.6750774          | 10.7819442              | 22.9506644             |
| lto-bootstrap-O2-generic-no-plugin     | 0.010433     | 0.01071628   | 26.7208076              | 3.5908778  | 12.64023       | 15.2836048        | 17.3819012          | 10.6346896              | 22.7239146             |
| pgo-bootstrap-O2-generic               | 0.01060311   | 0.01067778   | 25.0727128              | 3.0997666  | 11.477261      | 14.0093072        | 15.4398308          | 9.5103608               | 20.8500778             |
| pgo-lto-bootstrap-O2-generic           | 0.01034327   | 0.01049496   | 26.1758394              | 3.2296984  | 11.8700502     | 14.475056         | 16.1399782          | 9.8285434               | 21.4160712             |
| pgo-lto-bootstrap-O2-generic-no-plugin | 0.01016377   | 0.01072821   | 25.4679556              | 3.063584   | 11.2704452     | 13.7607252        | 15.2006938          | 9.3829418               | 20.463041              |
| pgo-lto-bootstrap-O2-native            | 0.01019504   | 0.01038209   | 25.5853726              | 3.19854    | 11.8373866     | 14.4315888        | 15.9624476          | 9.9008726               | 21.430638              |
| pgo-lto-bootstrap-O2-native-no-plugin  | 0.01079724   | 0.01019077   | 25.3136214              | 3.0440676  | 11.1994046     | 13.6741122        | 15.0679566          | 9.428948                | 20.3783794             |
| system-O2-generic                      | 0.01161027   | 0.01099082   | 26.8745384              | 3.5703712  | 12.4996418     | 15.1343302        | 17.2307564          | 10.6367484              | 22.4224152             |
| system-O2-generic-no-plugin            | 0.01100563   | 0.01083739   | 27.0475586              | 3.5400198  | 12.4402028     | 14.9656438        | 17.1015348          | 10.5653328              | 22.3336702             |
| system-O2-native                       | 0.01119548   | 0.01130184   | 26.8072366              | 3.5630546  | 12.4958216     | 15.1177104        | 17.2480664          | 10.6249                 | 22.417594              |

|  |                |                |                         |                |                |                   |                     |                         |                        |                |
|--|----------------|----------------|-------------------------|----------------|----------------|-------------------|---------------------|-------------------------|------------------------|----------------|
| GCC 8                                  | empty.c-100x   | empty.C-100x   | tramp3d-v4.ii -O2 -g-5x | i386.ii-5x     | i386.ii -O2-5x | i386.ii -O2 -g-5x | insn-emit.ii -O2-5x | generic-match.ii -O2-5x | gimple-match.ii -O2-5x | <b>AVERAGE</b> |
| <b>GCC 7.3.0 package</b>               | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b>          | <b>100.00%</b> | <b>100.00%</b> | <b>100.00%</b>    | <b>100.00%</b>      | <b>100.00%</b>          | <b>100.00%</b>         | <b>100.00%</b> |
| bootstrap-O2-generic                   | 96.12%         | 100.08%        | 113.78%                 | 116.38%        | 122.75%        | 124.77%           | 117.10%             | 126.56%                 | 118.85%                | 115.15%        |
| lto-bootstrap-O2-generic               | 102.64%        | 99.51%         | 114.73%                 | 118.39%        | 124.43%        | 125.32%           | 118.03%             | 127.62%                 | 119.29%                | 116.66%        |
| lto-bootstrap-O2-generic-no-plugin     | 95.52%         | 101.41%        | 113.34%                 | 116.64%        | 123.74%        | 124.65%           | 117.12%             | 127.11%                 | 118.89%                | 115.38%        |
| pgo-bootstrap-O2-generic               | 95.31%         | 94.69%         | 104.92%                 | 101.46%        | 110.60%        | 113.55%           | 104.05%             | 112.85%                 | 107.71%                | 105.02%        |
| pgo-lto-bootstrap-O2-generic           | 91.65%         | 90.85%         | 102.22%                 | 97.25%         | 106.37%        | 109.90%           | 100.02%             | 108.86%                 | 104.18%                | 101.26%        |
| pgo-lto-bootstrap-O2-generic-no-plugin | 93.74%         | 98.30%         | 102.03%                 | 97.44%         | 106.32%        | 110.03%           | 100.18%             | 108.77%                 | 104.00%                | 102.31%        |
| pgo-lto-bootstrap-O2-native            | 91.30%         | 91.07%         | 103.46%                 | 97.46%         | 108.22%        | 111.73%           | 100.44%             | 110.14%                 | 105.18%                | 102.11%        |
| pgo-lto-bootstrap-O2-native-no-plugin  | 90.29%         | 90.55%         | 104.13%                 | 98.30%         | 108.75%        | 111.98%           | 101.00%             | 110.65%                 | 105.61%                | 102.36%        |
| system-O2-generic                      | 96.30%         | 96.93%         | 114.25%                 | 118.18%        | 122.92%        | 125.34%           | 117.79%             | 126.41%                 | 118.43%                | 115.17%        |
| system-O2-generic-no-plugin            | 102.75%        | 96.08%         | 115.48%                 | 117.33%        | 123.51%        | 125.07%           | 118.02%             | 126.80%                 | 119.09%                | 116.01%        |
| system-O2-native                       | 97.11%         | 102.07%        | 114.87%                 | 117.53%        | 123.28%        | 125.60%           | 118.04%             | 126.57%                 | 118.90%                | 116.00%        |

|  |              |              |                         |            |                |                   |                     |                         |                        |                |
|--|--------------|--------------|-------------------------|------------|----------------|-------------------|---------------------|-------------------------|------------------------|----------------|
| GCC 8                                  | empty.c-100x | empty.C-100x | tramp3d-v4.ii -O2 -g-5x | i386.ii-5x | i386.ii -O2-5x | i386.ii -O2 -g-5x | insn-emit.ii -O2-5x | generic-match.ii -O2-5x | gimple-match.ii -O2-5x | <b>AVERAGE</b> |
| GCC 7.3.0 package                      | 93.57%       | 98.93%       | 99.50%                  | 99.35%     | 100.26%        | 99.67%            | 99.41%              | 98.96%                  | 99.57%                 | 98.80%         |
| bootstrap-O2-generic                   | 95.21%       | 98.33%       | 106.29%                 | 113.84%    | 109.24%        | 107.39%           | 110.25%             | 109.46%                 | 107.78%                | 106.42%        |
| lto-bootstrap-O2-generic               | 91.74%       | 101.81%      | 109.22%                 | 116.19%    | 111.56%        | 109.71%           | 112.76%             | 111.68%                 | 109.44%                | 108.23%        |
| lto-bootstrap-O2-generic-no-plugin     | 92.86%       | 93.28%       | 107.94%                 | 114.10%    | 110.24%        | 108.18%           | 110.89%             | 110.15%                 | 108.35%                | 106.22%        |
| pgo-bootstrap-O2-generic               | 94.37%       | 92.94%       | 101.29%                 | 98.50%     | 100.10%        | 99.16%            | 98.50%              | 98.50%                  | 99.42%                 | 98.09%         |
| pgo-lto-bootstrap-O2-generic           | 92.06%       | 91.35%       | 105.74%                 | 102.63%    | 103.53%        | 102.45%           | 102.97%             | 101.80%                 | 102.12%                | 100.52%        |
| pgo-lto-bootstrap-O2-generic-no-plugin | 90.46%       | 93.38%       | 102.88%                 | 97.35%     | 98.30%         | 97.40%            | 96.98%              | 97.18%                  | 97.57%                 | 96.83%         |
| pgo-lto-bootstrap-O2-native            | 90.74%       | 90.37%       | 103.36%                 | 101.64%    | 103.24%        | 102.15%           | 101.84%             | 102.55%                 | 102.19%                | 99.78%         |
| pgo-lto-bootstrap-O2-native-no-plugin  | 96.10%       | 88.70%       | 102.26%                 | 96.73%     | 97.68%         | 96.79%            | 96.13%              | 97.66%                  | 97.17%                 | 96.58%         |
| system-O2-generic                      | 103.33%      | 95.67%       | 108.56%                 | 113.45%    | 109.02%        | 107.12%           | 109.93%             | 110.17%                 | 106.92%                | 107.13%        |
| system-O2-generic-no-plugin            | 97.95%       | 94.33%       | 109.26%                 | 112.49%    | 108.50%        | 105.93%           | 109.10%             | 109.43%                 | 106.49%                | 105.94%        |
| system-O2-native                       | 99.64%       | 98.38%       | 108.29%                 | 113.22%    | 108.98%        | 107.00%           | 110.04%             | 110.05%                 | 106.89%                | 106.94%        |