SPEC CPU®2017 Integer Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

ScaleMP

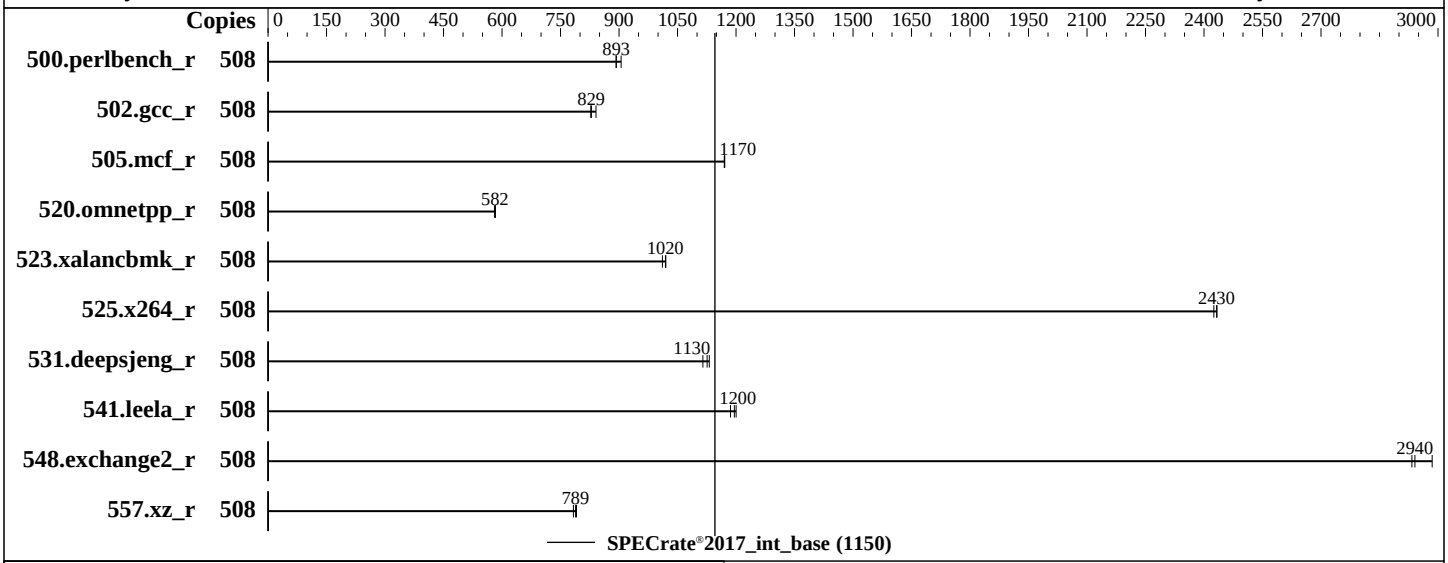
vSMP ServerONE
Supermicro A+ Server 2123BT-HNC0R (AMD EPYC 7702)

SPECrate®2017_int_base = 1150

SPECrate®2017_int_peak = Not Run

CPU2017 License: 2929
Test Sponsor: ScaleMP
Tested by: ScaleMP

Test Date: Dec-2019
Hardware Availability: Nov-2019
Software Availability: Nov-2019



Hardware

CPU Name:	AMD EPYC 7702
Max MHz:	3350
Nominal:	2000
Enabled:	256 cores, 4 chips, 2 threads/core
Orderable:	1-4 chips
Cache L1:	32 KB I + 32 KB D on chip per core
L2:	512 KB I+D on chip per core
L3:	256 MB I+D on chip per chip, 16 MB shared / 4 cores
Other:	None
Memory:	1 TB (32 x 32 GB 2Rx4 PC4-2667V-L)
Storage:	1 TB ramfs
Other:	ScaleMP vSMP Foundation aggregates multiple servers into one shared-memory system. Hardware Details: vSMP System was aggregated using 2 units of Supermicro A+ Server 2123BT-HNC0R. The servers were connected using Mellanox InfiniBand EDR fabric.

Software

OS:	SUSE Linux Enterprise Server 15 SP1, kernel version 4.12.14-197.21.1.vSMP.2-default
Compiler:	C/C++/Fortran: Version 2.0.0 of AOCC
Parallel:	No
Firmware:	ScaleMP vSMP Foundation version 9.5.195.18 released Dec-2019
File System:	ramfs
System State:	Run level 3 (multi-user)
Base Pointers:	64-bit
Peak Pointers:	Not Applicable
Other:	jemalloc: jemalloc memory allocator library v5.2.1
Power Management:	--

SPEC CPU®2017 Integer Rate Result

Copyright 2017-2020 Standard Performance Evaluation Corporation

ScaleMP

vSMP ServerONE
Supermicro A+ Server 2123BT-HNC0R (AMD EPYC 7702)

SPECrate®2017_int_base = 1150

SPECrate®2017_int_peak = Not Run

CPU2017 License: 2929
Test Sponsor: ScaleMP
Tested by: ScaleMP

Test Date: Dec-2019
Hardware Availability: Nov-2019
Software Availability: Nov-2019

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	508	893	905	**906**	**893**	906	892							
502.gcc_r	508	855	841	**868**	**829**	869	828							
505.mcf_r	508	702	1170	**701**	**1170**	701	1170							
520.omnetpp_r	508	1143	583	**1145**	**582**	1148	581							
523.xalancbmk_r	508	**526**	**1020**	526	1020	530	1010							
525.x264_r	508	366	2430	**366**	**2430**	367	2430							
531.deepsjeng_r	508	515	1130	**517**	**1130**	522	1120							
541.leela_r	508	**704**	**1200**	701	1200	709	1190							
548.exchange2_r	508	446	2990	454	2930	**453**	**2940**							
557.xz_r	508	694	791	**696**	**789**	701	783							

SPECrate®2017_int_base = 1150

SPECrate®2017_int_peak = Not Run

Results appear in the order in which they were run. Bold underlined text indicates a median measurement.

Compiler Notes

```
The AMD64 AOCC Compiler Suite is available at
http://developer.amd.com/amd-aocc/
```

Submit Notes

```
The config file option 'submit' was used.
'numactl' was used to bind copies to the cores.
See the configuration file for details.
```

Operating System Notes

```
'ulimit -s unlimited' was used to set environment stack size
'ulimit -l 2097152' was used to set environment locked pages in memory limit

runcpu command invoked through numactl i.e.:
numactl --interleave=all runcpu <etc>

Set dirty_ratio=8 to limit dirty cache to 8% of memory
Set swappiness=1 to swap only if necessary
Set zone_reclaim_mode=1 to free local node memory and avoid remote memory
sync then drop_caches=3 to reset caches before invoking runcpu
Set numa_stat=0 to improve page allocation performance
Set stat_interval=60 to reduce OS jitter

dirty_ratio, swappiness, zone_reclaim_mode, drop_caches, numa_stat and stat_interval were
```

(Continued on next page)

Operating System Notes (Continued)

```
all set using privileged echo (e.g. echo 1 > /proc/sys/vm/swappiness).

Transparent huge pages set to 'always' for this run (OS default)

Kernel Boot Parameter set with : nohz_full=!0
```

Environment Variables Notes

```
Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH =
     "/dev/shm/amd_rate_aocc200_rome_C_lib/64;/dev/shm/amd_rate_aocc200_rome_
     C_lib/32:/usr/local/lib:/usr/lib:/usr/lib64:/mnt/aocc-compiler-2.0.0/lib
     :/mnt/aocc-compiler-2.0.0/lib32:"
MALLOC_CONF = "retain:true,metadata_thp:always,thp:always,dirty_decay_ms:-1"
```

General Notes

```
Environment variables set by runcpu before the start of the run:
 LD_LIBRARY_PATH=/usr/local/lib:$LD_LIBRARY_PATH
 LIBRARY_PATH=/usr/local/lib:$LIBRARY_PATH
 MALLOC_TOP_PAD_=$((16777216))
 MALLOC_TRIM_THRESHOLD_=$((16777216))

NA: The test sponsor attests, as of date of publication, that CVE-2017-5754 (Meltdown)
is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5753 (Spectre variant 1)
is mitigated in the system as tested and documented.
Yes: The test sponsor attests, as of date of publication, that CVE-2017-5715 (Spectre variant 2)
is mitigated in the system as tested and documented.

jemalloc: configured and built with AMD64 AOCC v2.0.0 on this system with -Ofast -march=znver2
jemalloc 5.2.1 is available here:
https://github.com/jemalloc/jemalloc/releases/download/5.2.1/jemalloc-5.2.1.tar.bz2
```

Platform Notes

```
BIOS settings:
 Determinism Control = Manual
 Determinism Slider = Power
 cTDP Control = Manual
 cTDP = 180
 Package Power Limit Control = Manual
 Package Power Limit = 180
```

(Continued on next page)

Platform Notes (Continued)

```
 IOMMU = Enabled
 APBDIS = 1
 NUMA Nodes Per Socket = NPS4

 Sysinfo program /dev/shm/bin/sysinfo
 Rev: r6365 of 2019-08-21 295195f888a3d7edb1e6e46a485a0011
 running on 13d Sun Dec 22 04:01:06 2019

 SUT (System Under Test) info as seen by some common utilities.
 For more information on this section, see
    https://www.spec.org/cpu2017/Docs/config.html#sysinfo

 From /proc/cpuinfo
    model name : AMD EPYC 7702 64-Core Processor
       4  "physical id"s (chips)
       512 "processors"
    cores, siblings (Caution: counting these is hw and system dependent. The following
    excerpts from /proc/cpuinfo might not be reliable.  Use with caution.)
       cpu cores : 64
       siblings  : 128
       physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
       25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52
       53 54 55 56 57 58 59 60 61 62 63
       physical 1: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
       25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52
       53 54 55 56 57 58 59 60 61 62 63
       physical 2: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
       25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52
       53 54 55 56 57 58 59 60 61 62 63
       physical 3: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
       25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52
       53 54 55 56 57 58 59 60 61 62 63

 From lscpu:
      Architecture:        x86_64
      CPU op-mode(s):      32-bit, 64-bit
      Byte Order:          Little Endian
      Address sizes:       47 bits physical, 48 bits virtual
      CPU(s):              512
      On-line CPU(s) list: 0-511
      Thread(s) per core:  2
      Core(s) per socket:  64
      Socket(s):           4
      NUMA node(s):        16
      Vendor ID:           AuthenticAMD
      CPU family:          23
      Model:               49
```

(Continued on next page)

Platform Notes (Continued)

```
      Model name:            AMD EPYC 7702 64-Core Processor
      Stepping:              0
      CPU MHz:               2000.000
      CPU max MHz:           2000.0000
      CPU min MHz:           1800.0000
      BogoMIPS:              4000.10
      L1d cache:             32K
      L1i cache:             32K
      L2 cache:              512K
      L3 cache:              16384K
      NUMA node0 CPU(s):     0-15,256-271
      NUMA node1 CPU(s):     16-31,272-287
      NUMA node2 CPU(s):     32-47,288-303
      NUMA node3 CPU(s):     48-63,304-319
      NUMA node4 CPU(s):     64-79,320-335
      NUMA node5 CPU(s):     80-95,336-351
      NUMA node6 CPU(s):     96-111,352-367
      NUMA node7 CPU(s):     112-127,368-383
      NUMA node8 CPU(s):     128-143,384-399
      NUMA node9 CPU(s):     144-159,400-415
      NUMA node10 CPU(s):    160-175,416-431
      NUMA node11 CPU(s):    176-191,432-447
      NUMA node12 CPU(s):    192-207,448-463
      NUMA node13 CPU(s):    208-223,464-479
      NUMA node14 CPU(s):    224-239,480-495
      NUMA node15 CPU(s):    240-255,496-511
      Flags:                 fpu vme de pse tsc msr pae cx8 apic sep mtrr pge mca cmov pat
      pse36 clflush mmx fxsr sse sse2 ht syscall nx mmxext fxsr_opt pdpe1gb rdtscp lm
      constant_tsc rep_good nopl nonstop_tsc cpuid extd_apicid aperfmperf pni pclmulqdq
      ssse3 fma cx16 sse4_1 sse4_2 x2apic movbe popcnt aes xsave avx f16c rdrand lahf_lm
      cmp_legacy extapic cr8_legacy abm sse4a misalignsse 3dnowprefetch osvw skinit wdt
      tce topoext perfctr_core perfctr_nb bpext perfctr_l2 mwaitx cpb cat_l3 cdp_l3
      hw_pstate ssbd ibrs ibpb stibp vmmcall fsgsbase bmi1 avx2 smep bmi2 cqm rdt_a rdseed
      adx smap clflushopt clwb sha_ni xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc
      cqm_mbm_total cqm_mbm_local clzero irperf xsaveerptr arat npt lbrv svm_lock
      nrip_save tsc_scale vmcb_clean flushbyasid decodeassists pausefilter pfthreshold
      avic v_vmsave_vmload vgif umip rdpid overflow_recov succor smca

  /proc/cpuinfo cache data
     cache size : 512 KB

  From numactl --hardware  WARNING: a numactl 'node' might or might not correspond to a
  physical chip.
    available: 16 nodes (0-15)
    node 0 cpus: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 256 257 258 259 260 261 262 263 264
    265 266 267 268 269 270 271
    node 0 size: 47876 MB
```

(Continued on next page)

Platform Notes (Continued)

```
node 0 free: 44805 MB
node 1 cpus: 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 272 273 274 275 276 277
278 279 280 281 282 283 284 285 286 287
node 1 size: 59713 MB
node 1 free: 59598 MB
node 2 cpus: 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 288 289 290 291 292 293
294 295 296 297 298 299 300 301 302 303
node 2 size: 59713 MB
node 2 free: 59603 MB
node 3 cpus: 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 304 305 306 307 308 309
310 311 312 313 314 315 316 317 318 319
node 3 size: 59461 MB
node 3 free: 59338 MB
node 4 cpus: 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 320 321 322 323 324 325
326 327 328 329 330 331 332 333 334 335
node 4 size: 59461 MB
node 4 free: 59290 MB
node 5 cpus: 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 336 337 338 339 340 341
342 343 344 345 346 347 348 349 350 351
node 5 size: 59461 MB
node 5 free: 59186 MB
node 6 cpus: 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 352 353 354
355 356 357 358 359 360 361 362 363 364 365 366 367
node 6 size: 59461 MB
node 6 free: 59280 MB
node 7 cpus: 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 368 369
370 371 372 373 374 375 376 377 378 379 380 381 382 383
node 7 size: 59461 MB
node 7 free: 59232 MB
node 8 cpus: 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 384 385
386 387 388 389 390 391 392 393 394 395 396 397 398 399
node 8 size: 48121 MB
node 8 free: 48041 MB
node 9 cpus: 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 400 401
402 403 404 405 406 407 408 409 410 411 412 413 414 415
node 9 size: 59461 MB
node 9 free: 59391 MB
node 10 cpus: 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 416 417
418 419 420 421 422 423 424 425 426 427 428 429 430 431
node 10 size: 59461 MB
node 10 free: 59390 MB
node 11 cpus: 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 432 433
434 435 436 437 438 439 440 441 442 443 444 445 446 447
node 11 size: 59461 MB
node 11 free: 59391 MB
node 12 cpus: 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 448 449
450 451 452 453 454 455 456 457 458 459 460 461 462 463
```

(Continued on next page)

Platform Notes (Continued)

```
   node 12 size: 59461 MB
   node 12 free: 59390 MB
   node 13 cpus: 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 464 465
   466 467 468 469 470 471 472 473 474 475 476 477 478 479
   node 13 size: 59461 MB
   node 13 free: 59391 MB
   node 14 cpus: 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 480 481
   482 483 484 485 486 487 488 489 490 491 492 493 494 495
   node 14 size: 59461 MB
   node 14 free: 59391 MB
   node 15 cpus: 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 496 497
   498 499 500 501 502 503 504 505 506 507 508 509 510 511
   node 15 size: 59241 MB
   node 15 free: 59170 MB
   node distances:
   node   0   1   2   3   4   5   6   7   8   9  10  11  12  13  14  15
     0:  10  12  12  12  32  32  32  32 254 254 254 254 254 254 254 254
     1:  12  10  12  12  32  32  32  32 254 254 254 254 254 254 254 254
     2:  12  12  10  12  32  32  32  32 254 254 254 254 254 254 254 254
     3:  12  12  12  10  32  32  32  32 254 254 254 254 254 254 254 254
     4:  32  32  32  32  10  12  12  12 254 254 254 254 254 254 254 254
     5:  32  32  32  32  12  10  12  12 254 254 254 254 254 254 254 254
     6:  32  32  32  32  12  12  10  12 254 254 254 254 254 254 254 254
     7:  32  32  32  32  12  12  12  10 254 254 254 254 254 254 254 254
     8: 254 254 254 254 254 254 254 254  10  12  12  12  32  32  32  32
     9: 254 254 254 254 254 254 254 254  12  10  12  12  32  32  32  32
    10: 254 254 254 254 254 254 254 254  12  12  10  12  32  32  32  32
    11: 254 254 254 254 254 254 254 254  12  12  12  10  32  32  32  32
    12: 254 254 254 254 254 254 254 254  32  32  32  32  10  12  12  12
    13: 254 254 254 254 254 254 254 254  32  32  32  32  12  10  12  12
    14: 254 254 254 254 254 254 254 254  32  32  32  32  12  12  10  12
    15: 254 254 254 254 254 254 254 254  32  32  32  32  12  12  12  10

  From /proc/meminfo
     MemTotal:       951029164 kB
     HugePages_Total:       0
     Hugepagesize:       2048 kB

  From /etc/*release* /etc/*version*
     os-release:
        NAME="SLES"
        VERSION="15-SP1"
        VERSION_ID="15.1"
        PRETTY_NAME="SUSE Linux Enterprise Server 15 SP1"
        ID="sles"
        ID_LIKE="suse"
        ANSI_COLOR="0;32"
```

(Continued on next page)

Platform Notes (Continued)

```
      CPE_NAME="cpe:/o:suse:sles:15:sp1"

 uname -a:
    Linux 13d 4.12.14-197.21.1.vSMP.2-default #1 SMP Mon Oct 7 08:41:58 EDT 2019 (8ef2efd)
    x86_64 x86_64 x86_64 GNU/Linux

 Kernel self-reported vulnerability status:

 CVE-2018-3620 (L1 Terminal Fault):        Not affected
 Microarchitectural Data Sampling:         Not affected
 CVE-2017-5754 (Meltdown):                 Not affected
 CVE-2018-3639 (Speculative Store Bypass): Mitigation: Speculative Store Bypass disabled
                                            via prctl and seccomp
 CVE-2017-5753 (Spectre variant 1):        Mitigation: usercopy/swapgs barriers and __user
                                            pointer sanitization
 CVE-2017-5715 (Spectre variant 2):         Mitigation: Full AMD retpoline, IBPB:
                                           conditional, IBRS_FW, STIBP: conditional, RSB
                                            filling

 run-level 3 Dec 22 03:54

 SPEC is set to: /dev/shm
    Filesystem     Type   Size  Used Avail Use% Mounted on
    ramfs          ramfs     0     0     0    - /dev/shm

 From /sys/devices/virtual/dmi/id
     BIOS:    ScaleMP 9.5.195.18 12/19/2019
     Vendor:  ScaleMP
     Product: vSMP Foundation
     Serial:  1122334

 Additional information from dmidecode follows.  WARNING: Use caution when you interpret
 this section. The 'dmidecode' program reads system data which is "intended to allow
 hardware to be accurately determined", but the intent may not be met, as there are
 frequent changes to hardware, firmware, and the "DMTF SMBIOS" standard.
   Memory:
     16x Micron Technology 36ASF4G72PZ-2G6E1 32 kB 2 rank 2667
     16x SK Hynix HMA84GR7AFR4N-VK 32 kB 2 rank 2667

 (End of data from sysinfo program)
```

Compiler Version Notes

```
==============================================================================
C       | 500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base)
        | 525.x264_r(base) 557.xz_r(base)
```

(Continued on next page)

Compiler Version Notes (Continued)

```
------------------------------------------------------------------------------
AOCC.LLVM.2.0.0.B191.2019_07_19 clang version 8.0.0 (CLANG: Jenkins
  AOCC_2_0_0-Build#191) (based on LLVM AOCC.LLVM.2.0.0.B191.2019_07_19)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /mnt/aocc-compiler-2.0.0/bin
------------------------------------------------------------------------------

==============================================================================
C++     | 520.omnetpp_r(base) 523.xalancbmk_r(base) 531.deepsjeng_r(base)
        | 541.leela_r(base)
------------------------------------------------------------------------------
AOCC.LLVM.2.0.0.B191.2019_07_19 clang version 8.0.0 (CLANG: Jenkins
  AOCC_2_0_0-Build#191) (based on LLVM AOCC.LLVM.2.0.0.B191.2019_07_19)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /mnt/aocc-compiler-2.0.0/bin
------------------------------------------------------------------------------

==============================================================================
Fortran | 548.exchange2_r(base)
------------------------------------------------------------------------------
AOCC.LLVM.2.0.0.B191.2019_07_19 clang version 8.0.0 (CLANG: Jenkins
  AOCC_2_0_0-Build#191) (based on LLVM AOCC.LLVM.2.0.0.B191.2019_07_19)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /mnt/aocc-compiler-2.0.0/bin
------------------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:
`clang`

C++ benchmarks:
`clang++`

Fortran benchmarks:
`flang`

Base Portability Flags

500.perlbench_r: `-DSPEC_LINUX_X64 -DSPEC_LP64`

(Continued on next page)

Base Portability Flags (Continued)

502.gcc_r: -DSPEC_LP64
505.mcf_r: -DSPEC_LP64
520.omnetpp_r: -DSPEC_LP64
523.xalancbmk_r: -DSPEC_LINUX -DSPEC_LP64
525.x264_r: -DSPEC_LP64
531.deepsjeng_r: -DSPEC_LP64
541.leela_r: -DSPEC_LP64
548.exchange2_r: -DSPEC_LP64
557.xz_r: -DSPEC_LP64

Base Optimization Flags

C benchmarks:
-flto -Wl,-mllvm -Wl,-function-specialize
-Wl,-mllvm -Wl,-region-vectorize -Wl,-mllvm -Wl,-vector-library=LIBMVEC
-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -ffast-math
-march=znver2 -fstruct-layout=3 -mllvm -unroll-threshold=50
-fremap-arrays -mllvm -function-specialize -mllvm -enable-gvn-hoist
-mllvm -reduce-array-computations=3 -mllvm -global-vectorize-slp
-mllvm -vector-library=LIBMVEC -mllvm -inline-threshold=1000
-flv-function-specialization -z muldefs -lmvec -lamdlibm -ljemalloc
-lflang

C++ benchmarks:
-flto -Wl,-mllvm -Wl,-function-specialize
-Wl,-mllvm -Wl,-region-vectorize -Wl,-mllvm -Wl,-vector-library=LIBMVEC
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-suppress-fmas -O3 -ffast-math -march=znver2
-mllvm -loop-unswitch-threshold=200000 -mllvm -vector-library=LIBMVEC
-mllvm -unroll-threshold=100 -flv-function-specialization
-mllvm -enable-partial-unswitch -z muldefs -lmvec -lamdlibm
-ljemalloc -lflang

Fortran benchmarks:
-flto -Wl,-mllvm -Wl,-function-specialize
-Wl,-mllvm -Wl,-region-vectorize -Wl,-mllvm -Wl,-vector-library=LIBMVEC
-Wl,-mllvm -Wl,-reduce-array-computations=3 -ffast-math
-Wl,-mllvm -Wl,-inline-recursion=4 -Wl,-mllvm -Wl,-lsr-in-nested-loop
-Wl,-mllvm -Wl,-enable-iv-split -O3 -march=znver2 -funroll-loops
-Mrecursive -mllvm -vector-library=LIBMVEC -z muldefs
-mllvm -disable-indvar-simplify -mllvm -unroll-aggressive
-mllvm -unroll-threshold=150 -lmvec -lamdlibm -ljemalloc -lflang

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2017/flags/aocc200-flags-B1.html
http://www.spec.org/cpu2017/flags/ScaleMP-Supermicro-Platform-Settings-V1.2-Rome-revB.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/aocc200-flags-B1.xml
http://www.spec.org/cpu2017/flags/ScaleMP-Supermicro-Platform-Settings-V1.2-Rome-revB.xml

SPEC CPU and SPECrate are registered trademarks of the Standard Performance Evaluation Corporation. All other brand and product names appearing in this result are trademarks or registered trademarks of their respective holders.

For questions about this result, please contact the tester. For other inquiries, please contact info@spec.org.

Tested with SPEC CPU®2017 v1.1.0 on 2019-12-22 07:01:05-0500.
Report generated on 2020-01-13 16:34:23 by CPU2017 PS formatter v6255.
Originally published on 2020-01-13.