SPEC® CPU2017 Integer Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Supermicro
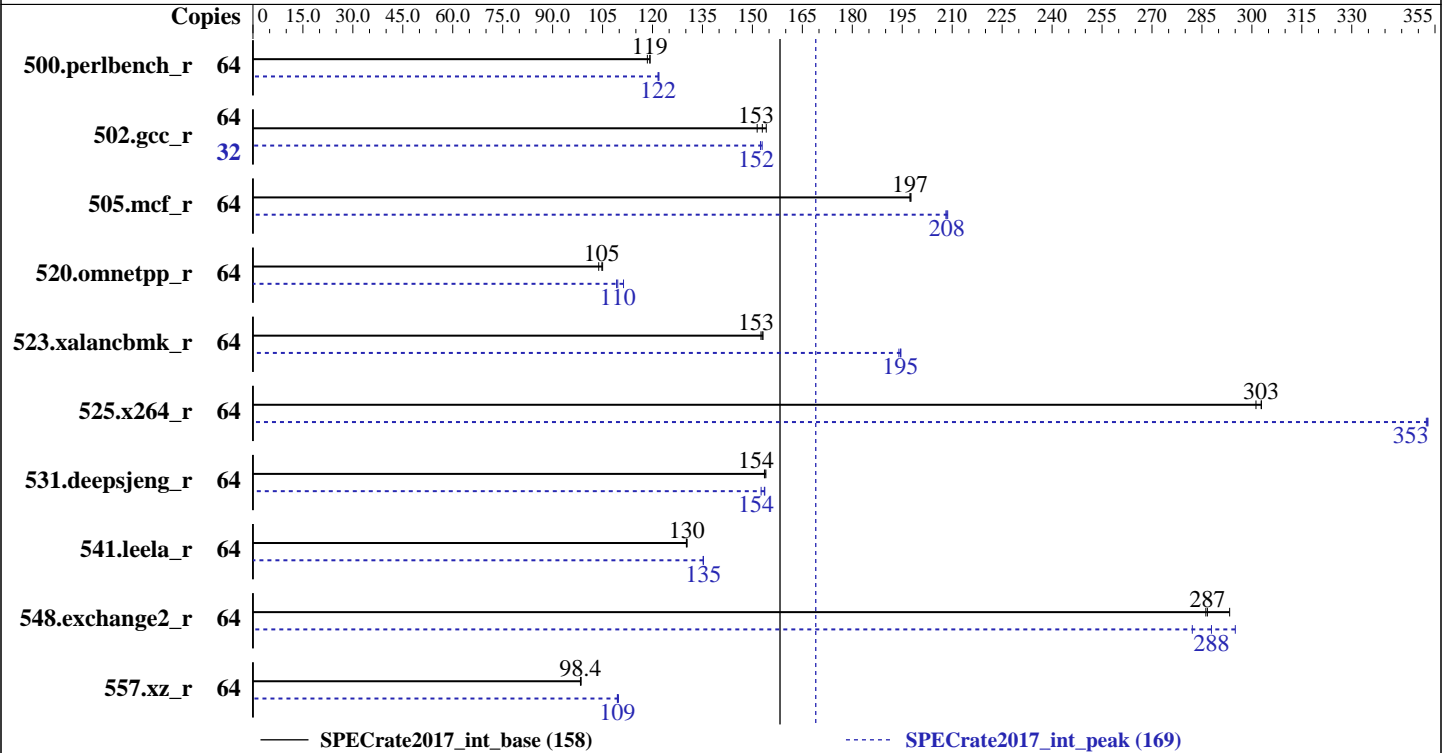
A+ Server 4023S-TRT
(H11DSi-NT , AMD EPYC 7301)

SPECrate2017_int_base =   158

SPECrate2017_int_peak =   169

CPU2017 License: 001176

Test Sponsor: Supermicro

Tested by: Supermicro

Test Date: May-2018

Hardware Availability: Jun-2017

Software Availability: Feb-2018

Copies	
500.perlbench_r	**64** 119 / 122
502.gcc_r	**64** 153 / **32** 152
505.mcf_r	**64** 197 / 208
520.omnetpp_r	**64** 105 / 110
523.xalancbmk_r	**64** 153 / 195
525.x264_r	**64** 303 / 353
531.deepsjeng_r	**64** 154 / 154
541.leela_r	**64** 130 / 135
548.exchange2_r	**64** 287 / 288
557.xz_r	**64** 98.4 / 109

——— SPECrate2017_int_base (158)   - - - - SPECrate2017_int_peak (169)

Hardware

CPU Name: AMD EPYC 7301
 Max MHz.: 2700
 Nominal: 2200
Enabled: 32 cores, 2 chips, 2 threads/core
Orderable: 1,2 chips
Cache L1:   64 KB I + 32 KB D on chip per core
 L2:   512 KB I+D on chip per core
 L3:   64 MB I+D on chip per chip, 8 MB shared / 2 cores
 Other: None
Memory: 1 TB (16 x 64 GB 4Rx4 PC4-2666V-L)
Storage: 1 x 500 GB SATAIII, 7200 RPM
Other: None

Software

OS: SUSE Linux Enterprise Server 12 SP3 (x86_64)
   kernel 4.4.114-94.11-default
Compiler: C/C++: Version 1.0.0 of AOCC
   Fortran: Version 4.8.2 of GCC
Parallel: No
Firmware: Supermicro BIOS version 1.1a released May-2018
File System: xfs
System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: 32/64-bit
Other: jemalloc general purpose malloc implementation
   V4.5.0

SPEC CPU2017 Integer Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Supermicro

A+ Server 4023S-TRT
(H11DSi-NT , AMD EPYC 7301)

SPECrate2017_int_base =   158

SPECrate2017_int_peak =   169

CPU2017 License: 001176

Test Sponsor: Supermicro

Tested by: Supermicro

Test Date: May-2018

Hardware Availability: Jun-2017

Software Availability: Feb-2018

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
500.perlbench_r	64	860	118	**855**	**119**	854	119	64	836	122	**837**	**122**	837	122
502.gcc_r	64	598	151	588	154	**592**	**153**	32	297	152	296	153	**297**	**152**
505.mcf_r	64	524	197	**524**	**197**	523	198	64	**496**	**208**	496	209	497	208
520.omnetpp_r	64	800	105	809	104	**801**	**105**	64	**766**	**110**	769	109	754	111
523.xalancbmk_r	64	441	153	**442**	**153**	443	153	64	348	194	347	195	**347**	**195**
525.x264_r	64	372	301	**370**	**303**	370	303	64	**318**	**353**	318	353	318	352
531.deepsjeng_r	64	**477**	**154**	476	154	477	154	64	477	154	481	153	**478**	**154**
541.leela_r	64	**813**	**130**	813	130	814	130	64	783	135	784	135	**783**	**135**
548.exchange2_r	64	586	286	**585**	**287**	572	293	64	568	295	**582**	**288**	594	282
557.xz_r	64	**702**	**98.4**	703	98.4	701	98.5	64	**631**	**109**	632	109	630	110
SPECrate2017_int_base =	158													
SPECrate2017_int_peak =	169													

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

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

runspec command invoked through numactl i.e.:
numactl --interleave=all runspec <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

dirty_ratio, swappiness, zone_reclaim_mode and drop_caches were
all set using privileged echo (e.g. echo 1 > /proc/sys/vm/swappiness).

Transparent huge pages were enabled for this run (OS default)

Huge pages were not configured for this run.
```

SPEC CPU2017 Integer Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Supermicro

A+ Server 4023S-TRT
(H11DSi-NT , AMD EPYC 7301)

SPECrate2017_int_base = 158

SPECrate2017_int_peak = 169

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: May-2018
Hardware Availability: Jun-2017
Software Availability: Feb-2018

General Notes

Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH = "/home/cpu2017/amd1704-rate-libs-revC/64;/home/cpu2017/amd1704-rate-libs-revC/32:"
MALLOC_CONF = "lg_chunk:26"

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

The AOCC Gold Linker plugin was installed and used for the link stage.

The AOCC Fortran Plugin version 1.0 was used to leverage AOCC optimizers
with gfortran. It is available here:
http://developer.amd.com/amd-aocc/

Binaries were compiled on a system with 2x AMD EPYC 7601 CPU + 512GB Memory using RHEL 7.4

jemalloc, a general purpose malloc implementation, was obtained at
https://github.com/jemalloc/jemalloc/releases/download/4.5.0/jemalloc-4.5.0.tar.bz2
jemalloc was built with GCC v4.8.5 in RHEL v7.2 under default conditions.
jemalloc uses environment variable MALLOC_CONF with values narenas and lg_chunk:
  narenas: sets the maximum number of arenas to use for automatic multiplexing
           of threads and arenas.
  lg_chunk: set the virtual memory chunk size (log base 2). For example,
            lg_chunk:21 sets the default chunk size to 2^21 = 2MiB.

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.

Platform Notes

BIOS Settings:
Determinism Slider = Power
 Sysinfo program /home/cpu2017/bin/sysinfo
 Rev: r5797 of 2017-06-14 96c45e4568ad54c135fd618bcc091c0f
 running on linux-769d Tue May 29 15:32:11 2018

 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 7301 16-Core Processor
       2 "physical id"s (chips)

(Continued on next page)

Standard Performance Evaluation Corporation (info@spec.org)   https://www.spec.org/

Supermicro

A+ Server 4023S-TRT
(H11DSi-NT , AMD EPYC 7301)

CPU2017 License: 001176   **Test Date:**   May-2018
Test Sponsor: Supermicro   **Hardware Availability:** Jun-2017
Tested by: Supermicro   **Software Availability:** Feb-2018

Platform Notes (Continued)

```
     64 "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 : 16
     siblings  : 32
     physical 0: cores 0 1 4 5 8 9 12 13 16 17 20 21 24 25 28 29
     physical 1: cores 0 1 4 5 8 9 12 13 16 17 20 21 24 25 28 29

 From lscpu:
     Architecture:          x86_64
     CPU op-mode(s):        32-bit, 64-bit
     Byte Order:            Little Endian
     CPU(s):                64
     On-line CPU(s) list:   0-63
     Thread(s) per core:    2
     Core(s) per socket:    16
     Socket(s):             2
     NUMA node(s):          8
     Vendor ID:             AuthenticAMD
     CPU family:            23
     Model:                 1
     Model name:            AMD EPYC 7301 16-Core Processor
     Stepping:              2
     CPU MHz:               2200.000
     CPU max MHz:           2200.0000
     CPU min MHz:           1200.0000
     BogoMIPS:              4400.04
     Virtualization:        AMD-V
     L1d cache:             32K
     L1i cache:             64K
     L2 cache:              512K
     L3 cache:              8192K
     NUMA node0 CPU(s):     0-3,32-35
     NUMA node1 CPU(s):     4-7,36-39
     NUMA node2 CPU(s):     8-11,40-43
     NUMA node3 CPU(s):     12-15,44-47
     NUMA node4 CPU(s):     16-19,48-51
     NUMA node5 CPU(s):     20-23,52-55
     NUMA node6 CPU(s):     24-27,56-59
     NUMA node7 CPU(s):     28-31,60-63
     Flags:                 fpu vme de pse tsc msr pae mce 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 extd_apicid amd_dcm aperfmperf eagerfpu pni
   pclmulqdq monitor ssse3 fma cx16 sse4_1 sse4_2 movbe popcnt aes xsave avx f16c
   rdrand lahf_lm cmp_legacy svm extapic cr8_legacy abm sse4a misalignsse 3dnowprefetch
   osvw skinit wdt tce topoext perfctr_core perfctr_nb bpext perfctr_l2 mwaitx arat cpb
   hw_pstate retpoline retpoline_amd npt lbrv svm_lock nrip_save tsc_scale vmcb_clean
```

(Continued on next page)

Supermicro

A+ Server 4023S-TRT
(H11DSi-NT , AMD EPYC 7301)

SPECrate2017_int_base = 158

SPECrate2017_int_peak = 169

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: May-2018
Hardware Availability: Jun-2017
Software Availability: Feb-2018

Platform Notes (Continued)

```
     flushbyasid decodeassists pausefilter pfthreshold vmmcall avic fsgsbase bmi1 avx2
     smep bmi2 rdseed adx smap clflushopt sha_ni xsaveopt xsavec xgetbv1 clzero irperf
     ibpb 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: 8 nodes (0-7)
   node 0 cpus: 0 1 2 3 32 33 34 35
   node 0 size: 128851 MB
   node 0 free: 128732 MB
   node 1 cpus: 4 5 6 7 36 37 38 39
   node 1 size: 129021 MB
   node 1 free: 128904 MB
   node 2 cpus: 8 9 10 11 40 41 42 43
   node 2 size: 129021 MB
   node 2 free: 128921 MB
   node 3 cpus: 12 13 14 15 44 45 46 47
   node 3 size: 129021 MB
   node 3 free: 128917 MB
   node 4 cpus: 16 17 18 19 48 49 50 51
   node 4 size: 129021 MB
   node 4 free: 128896 MB
   node 5 cpus: 20 21 22 23 52 53 54 55
   node 5 size: 129021 MB
   node 5 free: 128899 MB
   node 6 cpus: 24 25 26 27 56 57 58 59
   node 6 size: 129021 MB
   node 6 free: 128909 MB
   node 7 cpus: 28 29 30 31 60 61 62 63
   node 7 size: 116923 MB
   node 7 free: 116814 MB
   node distances:
   node   0    1    2    3    4    5    6    7
     0:  10   16   16   16   32   32   32   32
     1:  16   10   16   16   32   32   32   32
     2:  16   16   10   16   32   32   32   32
     3:  16   16   16   10   32   32   32   32
     4:  32   32   32   32   10   16   16   16
     5:  32   32   32   32   16   10   16   16
     6:  32   32   32   32   16   16   10   16
     7:  32   32   32   32   16   16   16   10

 From /proc/meminfo
   MemTotal:       1044379564 kB
```

(Continued on next page)

Standard Performance Evaluation Corporation (info@spec.org)
https://www.spec.org/

Supermicro

A+ Server 4023S-TRT
(H11DSi-NT , AMD EPYC 7301)

SPECrate2017_int_base =   158

SPECrate2017_int_peak =   169

Platform Notes (Continued)

```
      HugePages_Total:         0
      Hugepagesize:         2048 kB

 From /etc/*release* /etc/*version*
    SuSE-release:
       SUSE Linux Enterprise Server 12 (x86_64)
       VERSION = 12
       PATCHLEVEL = 3
       # This file is deprecated and will be removed in a future service pack or release.
       # Please check /etc/os-release for details about this release.
    os-release:
       NAME="SLES"
       VERSION="12-SP3"
       VERSION_ID="12.3"
       PRETTY_NAME="SUSE Linux Enterprise Server 12 SP3"
       ID="sles"
       ANSI_COLOR="0;32"
       CPE_NAME="cpe:/o:suse:sles:12:sp3"

 uname -a:
    Linux linux-769d 4.4.114-94.11-default #1 SMP Thu Feb 1 19:28:26 UTC 2018 (4309ff9)
    x86_64 x86_64 x86_64 GNU/Linux

 run-level 3 May 29 15:26

 SPEC is set to: /home/cpu2017
    Filesystem      Type  Size  Used Avail Use% Mounted on
    /dev/sda4       xfs   422G   25G  397G   6% /home

 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.
   BIOS American Megatrends Inc. 1.1a 05/02/2018
   Memory:
    16x Samsung M386A8K40BM2-CTD 64 GB 4 rank 2667

 (End of data from sysinfo program)
```

Compiler Version Notes

```
 ==============================================================================
  CC  502.gcc_r(peak)
 ------------------------------------------------------------------------------
 AOCC.LLVM.4.0.0.B35.2017_04_26 clang version 4.0.0 (CLANG:) (based on LLVM
   AOCC.LLVM.4.0.0.B35.2017_04_26)
```

(Continued on next page)

Supermicro

A+ Server 4023S-TRT
(H11DSi-NT , AMD EPYC 7301)

SPECrate2017_int_base = 158

SPECrate2017_int_peak = 169

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: May-2018
Hardware Availability: Jun-2017
Software Availability: Feb-2018

Compiler Version Notes (Continued)

```
Target: i386-unknown-linux-gnu
Thread model: posix
InstalledDir: /root/work/compilers/AOCC-1.0-Compiler/bin
-------------------------------------------------------------------------


==============================================================================
 CXXC 523.xalancbmk_r(peak)
------------------------------------------------------------------------------
AOCC.LLVM.4.0.0.B35.2017_04_26 clang version 4.0.0 (CLANG:) (based on LLVM
  AOCC.LLVM.4.0.0.B35.2017_04_26)
Target: i386-unknown-linux-gnu
Thread model: posix
InstalledDir: /root/work/compilers/AOCC-1.0-Compiler/bin
-------------------------------------------------------------------------


==============================================================================
  CC   500.perlbench_r(base) 502.gcc_r(base) 505.mcf_r(base, peak)
       525.x264_r(base) 557.xz_r(base, peak)
------------------------------------------------------------------------------
AOCC.LLVM.4.0.0.B35.2017_04_26 clang version 4.0.0 (CLANG:) (based on LLVM
  AOCC.LLVM.4.0.0.B35.2017_04_26)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /root/work/compilers/AOCC-1.0-Compiler/bin
-------------------------------------------------------------------------


==============================================================================
 CXXC 520.omnetpp_r(base, peak) 523.xalancbmk_r(base) 531.deepsjeng_r(base,
       peak) 541.leela_r(base)
------------------------------------------------------------------------------
AOCC.LLVM.4.0.0.B35.2017_04_26 clang version 4.0.0 (CLANG:) (based on LLVM
  AOCC.LLVM.4.0.0.B35.2017_04_26)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /root/work/compilers/AOCC-1.0-Compiler/bin
-------------------------------------------------------------------------


==============================================================================
  CC   500.perlbench_r(peak) 525.x264_r(peak)
------------------------------------------------------------------------------
AOCC.LLVM.4.0.0.B35.2017_04_26 clang version 4.0.0 (CLANG:) (based on LLVM
  AOCC.LLVM.4.0.0.B35.2017_04_26)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /root/work/compilers/AOCC-1.0-Compiler/bin
-------------------------------------------------------------------------
```

(Continued on next page)

Supermicro

A+ Server 4023S-TRT
(H11DSi-NT , AMD EPYC 7301)

SPECrate2017_int_base = 158

SPECrate2017_int_peak = 169

CPU2017 License: 001176

Test Sponsor: Supermicro

Tested by: Supermicro

Test Date: May-2018

Hardware Availability: Jun-2017

Software Availability: Feb-2018

Compiler Version Notes (Continued)

```
==============================================================================
CXXC 541.leela_r(peak)
------------------------------------------------------------------------------
AOCC.LLVM.4.0.0.B35.2017_04_26 clang version 4.0.0 (CLANG:) (based on LLVM
  AOCC.LLVM.4.0.0.B35.2017_04_26)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /root/work/compilers/AOCC-1.0-Compiler/bin
------------------------------------------------------------------------------


==============================================================================
 FC  548.exchange2_r(base, peak)
------------------------------------------------------------------------------
GNU Fortran (GCC) 4.8.2
Copyright (C) 2013 Free Software Foundation, Inc.
GNU Fortran comes with NO WARRANTY, to the extent permitted by law.
You may redistribute copies of GNU Fortran
under the terms of the GNU General Public License.
For more information about these matters, see the file named COPYING
------------------------------------------------------------------------------
```

Base Compiler Invocation

C benchmarks:
clang

C++ benchmarks:
clang++

Fortran benchmarks:
clang gfortran

Base Portability Flags

```
500.perlbench_r: -DSPEC_LINUX_X64 -DSPEC_LP64
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
```

(Continued on next page)

SPEC CPU2017 Integer Rate Result

Supermicro

A+ Server 4023S-TRT
(H11DSi-NT , AMD EPYC 7301)

SPECrate2017_int_base = 158

SPECrate2017_int_peak = 169

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: May-2018
Hardware Availability: Jun-2017
Software Availability: Feb-2018

Base Portability Flags (Continued)

557.xz_r: -DSPEC_LP64

Base Optimization Flags

C benchmarks:
-flto -Wl, -plugin-opt= -merge-constant -lsr-in-nested-loop
-disable-vect-cmp -O3 -ffast-math -march=znver1 -fstruct-layout=2
-mllvm -unroll-threshold=100 -fremap-arrays -mno-avx2
-inline-threshold=1000 -z muldefs -ljemalloc

C++ benchmarks:
-flto -Wl, -plugin-opt= -merge-constant -lsr-in-nested-loop
-disable-vect-cmp -O3 -march=znver1 -mllvm -unroll-threshold=100
-finline-aggressive -fremap-arrays -inline-threshold=1000 -z muldefs
-ljemalloc

Fortran benchmarks:
-flto -Wl, -plugin-opt= -merge-constant -lsr-in-nested-loop
-disable-vect-cmp -O3(gfortran) -O3(clang) -mavx -madx
-funroll-loops -ffast-math -z muldefs -Ofast -fdefault-integer-8
-fplugin=dragonegg.so -fplugin-arg-dragonegg-llvm-option="
-enable-iv-split -inline-threshold:1000 -disable-vect-cmp" -ljemalloc
-lgfortran -lamdlibm

Peak Compiler Invocation

C benchmarks:
clang

C++ benchmarks:
clang++

Fortran benchmarks:
clang gfortran

Peak Portability Flags

500.perlbench_r: -DSPEC_LINUX_X64 -DSPEC_LP64
502.gcc_r: -D_FILE_OFFSET_BITS=64

(Continued on next page)

Standard Performance Evaluation Corporation (info@spec.org) https://www.spec.org/

Supermicro

A+ Server 4023S-TRT
(H11DSi-NT , AMD EPYC 7301)

SPECrate2017_int_base = 158

SPECrate2017_int_peak = 169

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: May-2018
Hardware Availability: Jun-2017
Software Availability: Feb-2018

Peak Portability Flags (Continued)

505.mcf_r: `-DSPEC_LP64`
520.omnetpp_r: `-DSPEC_LP64`
523.xalancbmk_r: `-DSPEC_LINUX -D_FILE_OFFSET_BITS=64`
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`

Peak Optimization Flags

C benchmarks:

500.perlbench_r: `-flto -Wl, -plugin-opt= -merge-constant`
`-lsr-in-nested-loop -fprofile-instr-generate`(pass 1)
`-fprofile-instr-use`(pass 2) `-Ofast -march=znver1`
`-fstruct-layout=3 -mllvm -vectorize-memory-aggressively`
`-mno-avx2 -unroll-threshold=100 -fremap-arrays`
`-inline-threshold=1000 -ljemalloc`

502.gcc_r: `-m32 -flto -Wl, -plugin-opt= -merge-constant`
`-lsr-in-nested-loop -Ofast -march=znver1`
`-fstruct-layout=3 -mllvm -vectorize-memory-aggressively`
`-mno-avx2 -unroll-threshold=100 -fremap-arrays`
`-inline-threshold=1000 -fgnu89-inline`
`-L/root/work/lib/jemalloc/lib32 -ljemalloc`

505.mcf_r: `-flto -Wl, -plugin-opt= -merge-constant`
`-lsr-in-nested-loop -Ofast -march=znver1`
`-fstruct-layout=3 -mllvm -vectorize-memory-aggressively`
`-mno-avx2 -unroll-threshold=100 -fremap-arrays`
`-inline-threshold=1000 -ljemalloc`

525.x264_r: `Same as 500.perlbench_r`

557.xz_r: `Same as 505.mcf_r`

C++ benchmarks:

520.omnetpp_r: `-flto -Wl, -plugin-opt= -merge-constant`
`-lsr-in-nested-loop -Ofast -march=znver1`
`-finline-aggressive -mllvm -unroll-threshold=100`
`-fremap-arrays -inline-threshold=1000 -ljemalloc`

(Continued on next page)

Standard Performance Evaluation Corporation (info@spec.org)
https://www.spec.org/

Supermicro

A+ Server 4023S-TRT
(H11DSi-NT , AMD EPYC 7301)

SPECrate2017_int_base = 158

SPECrate2017_int_peak = 169

CPU2017 License: 001176
Test Sponsor: Supermicro
Tested by: Supermicro

Test Date: May-2018
Hardware Availability: Jun-2017
Software Availability: Feb-2018

Peak Optimization Flags (Continued)

523.xalancbmk_r: -m32 -flto -Wl, -plugin-opt= -merge-constant
-lsr-in-nested-loop -Ofast -march=znver1
-finline-aggressive -mllvm -unroll-threshold=100
-fremap-arrays -inline-threshold=1000
-L/root/work/lib/jemalloc/lib32 -ljemalloc

531.deepsjeng_r: Same as 520.omnetpp_r

541.leela_r: -flto -Wl, -plugin-opt= -merge-constant
-lsr-in-nested-loop -fprofile-instr-generate(pass 1)
-fprofile-instr-use(pass 2) -Ofast -march=znver1 -mllvm
-unroll-count=8 -unroll-threshold=100 -ljemalloc

Fortran benchmarks:
-flto -Wl, -plugin-opt= -merge-constant -lsr-in-nested-loop
-O3(gfortran) -O3(clang) -mavx2 -madx -funroll-loops -ffast-math
-Ofast -fdefault-integer-8 -fplugin=dragonegg.so
-fplugin-arg-dragonegg-llvm-option=" -enable-iv-split
-inline-threshold:1000 -disable-vect-cmp" -ljemalloc -lgfortran
-lamdlibm

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2017/flags/gcc.2018-02-16.html
http://www.spec.org/cpu2017/flags/aocc100-flags-revC-I.2018-02-16.html
http://www.spec.org/cpu2017/flags/Supermicro-Platform-Settings-V1.2-Naples-revD.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/gcc.2018-02-16.xml
http://www.spec.org/cpu2017/flags/aocc100-flags-revC-I.2018-02-16.xml
http://www.spec.org/cpu2017/flags/Supermicro-Platform-Settings-V1.2-Naples-revD.xml

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

Tested with SPEC CPU2017 v1.0.2 on 2018-05-29 03:32:10-0400.
Report generated on 2019-02-21 15:58:37 by CPU2017 PDF formatter v6067.
Originally published on 2018-06-26.