



SPEC® CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Sugon

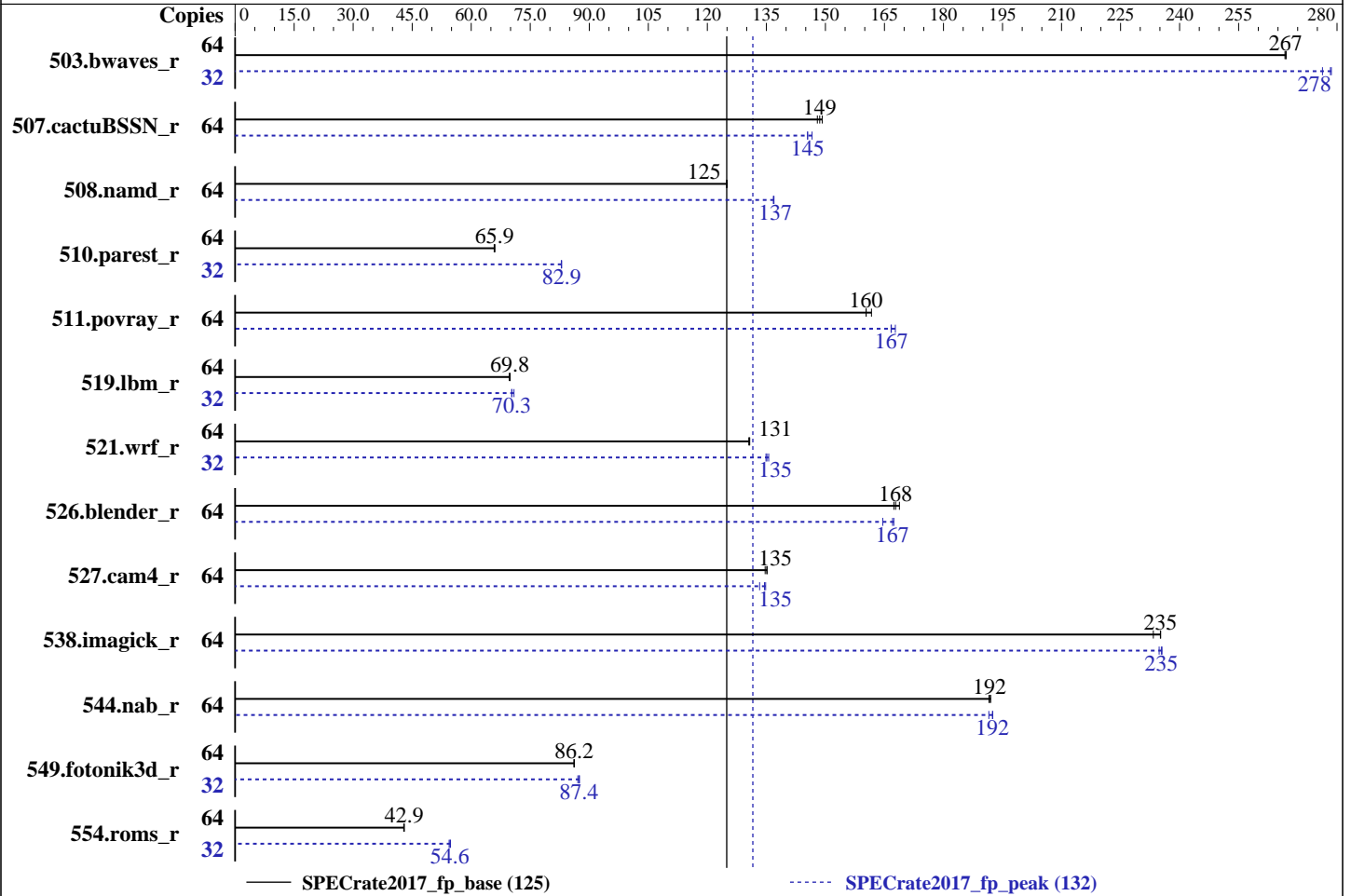
SPECrate2017_fp_base = 125

Sugon A320-G30 (AMD EPYC 7601)

SPECrate2017_fp_peak = 132

CPU2017 License: 9046
Test Sponsor: Sugon
Tested by: Sugon

Test Date: Dec-2017
Hardware Availability: Dec-2017
Software Availability: Aug-2017



Hardware

CPU Name: AMD EPYC 7601
 Max MHz.: 3200
 Nominal: 2200
 Enabled: 32 cores, 1 chip, 2 threads/core
 Orderable: 1 chip
 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 / 4 cores
 Other: None
 Memory: 256 GB (8 x 32 GB 2Rx4 PC4-2667V-R, running at 2400)
 Storage: 1 x 1000 GB SATA, 7200 RPM
 Other: None

Software

OS: Red Hat Enterprise Linux Server 7.4
 kernel 3.10.0-693.2.2
 Compiler: C/C++: Version 1.0.0 of AOCC
 Fortran: Version 4.8.2 of GCC
 Parallel: No
 Firmware: American Megatrends Inc. BIOS Version 1QLSH015 released Oct-2017
 File System: xfs
 System State: Run level 3 (Multi User)
 Base Pointers: 64-bit
 Peak Pointers: 32/64-bit
 Other: None



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Sugon

SPECrate2017_fp_base = 125

Sugon A320-G30 (AMD EPYC 7601)

SPECrate2017_fp_peak = 132

CPU2017 License: 9046
Test Sponsor: Sugon
Tested by: Sugon

Test Date: Dec-2017
Hardware Availability: Dec-2017
Software Availability: Aug-2017

Results Table

Benchmark	Base							Peak						
	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio	Copies	Seconds	Ratio	Seconds	Ratio	Seconds	Ratio
503.bwaves_r	64	2406	267	2403	267	2404	267	32	1152	279	1161	276	1153	278
507.cactuBSSN_r	64	545	149	543	149	548	148	64	557	145	553	147	557	145
508.namd_r	64	487	125	487	125	486	125	64	444	137	445	137	444	137
510.parest_r	64	2536	66.0	2540	65.9	2543	65.8	32	1009	82.9	1010	82.9	1009	83.0
511.povray_r	64	932	160	932	160	924	162	64	897	167	896	167	891	168
519.lbm_r	64	966	69.8	965	69.9	969	69.6	32	480	70.3	480	70.3	476	70.9
521.wrf_r	64	1096	131	1097	131	1098	131	32	530	135	531	135	529	136
526.blender_r	64	581	168	582	167	577	169	64	592	165	583	167	582	167
527.cam4_r	64	828	135	829	135	831	135	64	830	135	832	135	840	133
538.imagick_r	64	677	235	677	235	682	233	64	676	235	678	235	676	236
544.nab_r	64	562	192	561	192	562	192	64	559	193	562	192	560	192
549.fotonik3d_r	64	2896	86.1	2895	86.2	2894	86.2	32	1425	87.5	1427	87.4	1432	87.1
554.roms_r	64	2373	42.9	2369	42.9	2365	43.0	32	931	54.6	929	54.7	935	54.4

SPECrate2017_fp_base = 125

SPECrate2017_fp_peak = 132

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

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

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 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Sugon

SPECrate2017_fp_base = 125

Sugon A320-G30 (AMD EPYC 7601)

SPECrate2017_fp_peak = 132

CPU2017 License: 9046
Test Sponsor: Sugon
Tested by: Sugon

Test Date: Dec-2017
Hardware Availability: Dec-2017
Software Availability: Aug-2017

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:"
MALLOCONF = "lg_chunk:28"

The AMD64 AOCC Compiler Suite is available at
<http://developer.amd.com/tools-and-sdks/cpu-development/amd-optimizing-cc-compiler/>

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 MALLOCONF 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.

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/>

Platform Notes

BIOS settings:
Determinism Slider = Power
cTDP Control = Manual
cTDP = 200
Sysinfo program /home/cpu2017/bin/sysinfo
Rev: r5797 of 2017-06-14 96c45e4568ad54c135fd618bcc091c0f
running on localhost Sun Dec 3 14:53:17 2017

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 7601 32-Core Processor
1 "physical id"s (chips)
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 : 32
siblings : 64

(Continued on next page)



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Sugon

SPECrate2017_fp_base = 125

Sugon A320-G30 (AMD EPYC 7601)

SPECrate2017_fp_peak = 132

CPU2017 License: 9046
Test Sponsor: Sugon
Tested by: Sugon

Test Date: Dec-2017
Hardware Availability: Dec-2017
Software Availability: Aug-2017

Platform Notes (Continued)

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

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:    32
Socket(s):              1
NUMA node(s):          4
Vendor ID:              AuthenticAMD
CPU family:             23
Model:                  1
Model name:             AMD EPYC 7601 32-Core Processor
Stepping:               2
CPU MHz:                2200.000
CPU max MHz:            2200.0000
CPU min MHz:            1200.0000
BogoMIPS:               4391.17
Virtualization:        AMD-V
L1d cache:              32K
L1i cache:              64K
L2 cache:               512K
L3 cache:               8192K
NUMA node0 CPU(s):     0-7,32-39
NUMA node1 CPU(s):     8-15,40-47
NUMA node2 CPU(s):     16-23,48-55
NUMA node3 CPU(s):     24-31,56-63
```

```
Flags:                  fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov
pat pse36 clflush mmx fxsr sse2 ht syscall nx mmxext fxsr_opt pdpe1gb rdtscp lm
constant_tsc art rep_good nopl nonstop_tsc extd_apicid 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 cpb
hw_pstate avic fsgsbase bmi1 avx2 smep bmi2 rdseed adx smap clflushopt sha_ni
xsaveopt xsavec xgetbv1 arat npt lbrv svm_lock nrip_save tsc_scale vmcb_clean
flushbyasid decodeassists pausefilter pfthreshold 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: 4 nodes (0-3)
```

(Continued on next page)



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Sugon

SPECrate2017_fp_base = 125

Sugon A320-G30 (AMD EPYC 7601)

SPECrate2017_fp_peak = 132

CPU2017 License: 9046
Test Sponsor: Sugon
Tested by: Sugon

Test Date: Dec-2017
Hardware Availability: Dec-2017
Software Availability: Aug-2017

Platform Notes (Continued)

```

node 0 cpus: 0 1 2 3 4 5 6 7 32 33 34 35 36 37 38 39
node 0 size: 64644 MB
node 0 free: 63072 MB
node 1 cpus: 8 9 10 11 12 13 14 15 40 41 42 43 44 45 46 47
node 1 size: 65535 MB
node 1 free: 63966 MB
node 2 cpus: 16 17 18 19 20 21 22 23 48 49 50 51 52 53 54 55
node 2 size: 65535 MB
node 2 free: 63993 MB
node 3 cpus: 24 25 26 27 28 29 30 31 56 57 58 59 60 61 62 63
node 3 size: 65535 MB
node 3 free: 63973 MB
node distances:
node  0  1  2  3
  0:  10  16  16  16
  1:  16  10  16  16
  2:  16  16  10  16
  3:  16  16  16  10

```

```

From /proc/meminfo
MemTotal:      263303876 kB
HugePages_Total:      0
Hugepagesize:    2048 kB

```

```

From /etc/*release* /etc/*version*
os-release:
NAME="Red Hat Enterprise Linux Server"
VERSION="7.4 (Maipo)"
ID="rhel"
ID_LIKE="fedora"
VARIANT="Server"
VARIANT_ID="server"
VERSION_ID="7.4"
PRETTY_NAME="Red Hat Enterprise Linux Server 7.4 (Maipo)"
redhat-release: Red Hat Enterprise Linux Server release 7.4 (Maipo)
system-release: Red Hat Enterprise Linux Server release 7.4 (Maipo)
system-release-cpe: cpe:/o:redhat:enterprise_linux:7.4:ga:server

```

```

uname -a:
Linux localhost 3.10.0-693.2.2.el7.x86_64 #1 SMP Mon Sep 25 08:21:56 EDT 2017 x86_64
x86_64 x86_64 GNU/Linux

```

run-level 3 Dec 1 13:22

```

SPEC is set to: /home/cpu2017
Filesystem      Type  Size  Used Avail Use% Mounted on
/dev/mapper/rhel-home xfs   877G   59G  818G   7% /home

```

(Continued on next page)



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Sugon

SPECrate2017_fp_base = 125

Sugon A320-G30 (AMD EPYC 7601)

SPECrate2017_fp_peak = 132

CPU2017 License: 9046
Test Sponsor: Sugon
Tested by: Sugon

Test Date: Dec-2017
Hardware Availability: Dec-2017
Software Availability: Aug-2017

Platform Notes (Continued)

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. 1QLSH015 10/19/2017

Memory:

8x Samsung M393A4K40CB2-CTD 32 GB 2 rank 2666, configured at 2400

8x Unknown Unknown

(End of data from sysinfo program)

Compiler Version Notes

=====
CC 519.lbm_r(base, peak) 538.imagick_r(base, peak) 544.nab_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 508.namd_r(base, peak) 510.parest_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

=====
CC 511.povray_r(base, peak) 526.blender_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
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

(Continued on next page)



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Sugon

SPECrate2017_fp_base = 125

Sugon A320-G30 (AMD EPYC 7601)

SPECrate2017_fp_peak = 132

CPU2017 License: 9046
Test Sponsor: Sugon
Tested by: Sugon

Test Date: Dec-2017
Hardware Availability: Dec-2017
Software Availability: Aug-2017

Compiler Version Notes (Continued)

InstalledDir: /root/work/compilers/AOCC-1.0-Compiler/bin

=====
FC 507.cactuBSSN_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

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

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

=====
FC 503.bwaves_r(base, peak) 549.fotonik3d_r(base, peak) 554.roms_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

=====
CC 521.wrf_r(base, peak) 527.cam4_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

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)



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Sugon

SPECrate2017_fp_base = 125

Sugon A320-G30 (AMD EPYC 7601)

SPECrate2017_fp_peak = 132

CPU2017 License: 9046
Test Sponsor: Sugon
Tested by: Sugon

Test Date: Dec-2017
Hardware Availability: Dec-2017
Software Availability: Aug-2017

Compiler Version Notes (Continued)

Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /root/work/compilers/AOCC-1.0-Compiler/bin

Base Compiler Invocation

C benchmarks:
clang

C++ benchmarks:
clang++

Fortran benchmarks:
clang gfortran

Benchmarks using both Fortran and C:
clang gfortran

Benchmarks using both C and C++:
clang++ clang

Benchmarks using Fortran, C, and C++:
clang++ clang gfortran

Base Portability Flags

503.bwaves_r: -DSPEC_LP64
507.cactuBSSN_r: -DSPEC_LP64
508.namd_r: -DSPEC_LP64
510.parest_r: -DSPEC_LP64
511.povray_r: -DSPEC_LP64
519.lbm_r: -DSPEC_LP64
521.wrf_r: -DSPEC_CASE_FLAG -fconvert=big-endian -DSPEC_LP64
526.blender_r: -funsigned-char -D__BOOL_DEFINED -DSPEC_LP64
527.cam4_r: -DSPEC_CASE_FLAG -DSPEC_LP64
538.imagick_r: -DSPEC_LP64
544.nab_r: -DSPEC_LP64
549.fotonik3d_r: -DSPEC_LP64
554.roms_r: -DSPEC_LP64



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Sugon

SPECrate2017_fp_base = 125

Sugon A320-G30 (AMD EPYC 7601)

SPECrate2017_fp_peak = 132

CPU2017 License: 9046
Test Sponsor: Sugon
Tested by: Sugon

Test Date: Dec-2017
Hardware Availability: Dec-2017
Software Availability: Aug-2017

Base Optimization Flags

C benchmarks:

```
-flto -Wl,-plugin-opt= -merge-constant  
-Wl,-plugin-opt=-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  
-Wl,-plugin-opt=-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  
-Wl,-plugin-opt=-lsr-in-nested-loop -disable-vect-cmp -O3(gfortran)  
-O3(clang) -mavx -madox -funroll-loops -ffast-math -z muldefs  
-fplugin=dragonegg.so  
-fplugin-arg-dragonegg-llvm-option="-merge-constant -disable-vect-cmp"  
-ljemalloc -lgfortran -lamdlibm
```

Benchmarks using both Fortran and C:

```
-flto -Wl,-plugin-opt= -merge-constant  
-Wl,-plugin-opt=-lsr-in-nested-loop -disable-vect-cmp -O3(clang)  
-ffast-math -march=znver1 -fstruct-layout=2 -mllvm  
-unroll-threshold=100 -fremap-arrays -mno-avx2 -inline-threshold=1000  
-O3(gfortran) -mavx -madox -funroll-loops -z muldefs  
-fplugin=dragonegg.so  
-fplugin-arg-dragonegg-llvm-option="-merge-constant -disable-vect-cmp"  
-ljemalloc -lgfortran -lamdlibm
```

Benchmarks using both C and C++:

```
-flto -Wl,-plugin-opt= -merge-constant  
-Wl,-plugin-opt=-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 -finline-aggressive  
-z muldefs -ljemalloc
```

Benchmarks using Fortran, C, and C++:

```
-flto -Wl,-plugin-opt= -merge-constant  
-Wl,-plugin-opt=-lsr-in-nested-loop -disable-vect-cmp -O3(clang)  
-ffast-math -march=znver1 -fstruct-layout=2 -mllvm  
-unroll-threshold=100 -fremap-arrays -mno-avx2 -inline-threshold=1000  
-finline-aggressive -O3(gfortran) -mavx -madox -funroll-loops  
-z muldefs -fplugin=dragonegg.so  
-fplugin-arg-dragonegg-llvm-option="-merge-constant -disable-vect-cmp"  
-ljemalloc
```



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Sugon

SPECrate2017_fp_base = 125

Sugon A320-G30 (AMD EPYC 7601)

SPECrate2017_fp_peak = 132

CPU2017 License: 9046
Test Sponsor: Sugon
Tested by: Sugon

Test Date: Dec-2017
Hardware Availability: Dec-2017
Software Availability: Aug-2017

Peak Compiler Invocation

C benchmarks:

clang

C++ benchmarks:

clang++

Fortran benchmarks:

clang gfortran

Benchmarks using both Fortran and C:

clang gfortran

Benchmarks using both C and C++:

clang++ clang

Benchmarks using Fortran, C, and C++:

clang++ clang gfortran

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:

```
-flto -Wl,-plugin-opt=-merge-constant  
-Wl,-plugin-opt=-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
```

C++ benchmarks:

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

Fortran benchmarks:

```
-flto -Wl,-plugin-opt=-merge-constant  
-Wl,-plugin-opt=-lsr-in-nested-loop -O3(gfortran) -O3(clang) -mavx2  
-madx -funroll-loops -ffast-math -fplugin=dragonegg.so  
-fplugin-arg-dragonegg-llvm-option="-merge-constant  
-inline-threshold:1000" -ljemalloc -lgfortran -lamdlibm
```

(Continued on next page)



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Sugon

SPECrate2017_fp_base = 125

Sugon A320-G30 (AMD EPYC 7601)

SPECrate2017_fp_peak = 132

CPU2017 License: 9046
Test Sponsor: Sugon
Tested by: Sugon

Test Date: Dec-2017
Hardware Availability: Dec-2017
Software Availability: Aug-2017

Peak Optimization Flags (Continued)

Benchmarks using both Fortran and C:

```
521.wrf_r: -flto -Wl,-plugin-opt= -merge-constant  
-Wl,-plugin-opt=-lsr-in-nested-loop -O3(clang) -mavx  
-ffast-math -O3(gfortran) -funroll-loops  
-fplugin=dragonegg.so  
-fplugin-arg-dragonegg-llvm-option="-merge-constant  
-inline-threshold:1000" -ljemalloc -lgfortran -lamdlibm
```

```
527.cam4_r: -flto -Wl,-plugin-opt= -merge-constant  
-Wl,-plugin-opt=-lsr-in-nested-loop -Ofast -march=znver1  
-fstruct-layout=3 -mllvm -vectorize-memory-aggressively  
-mno-avx2 -unroll-threshold=100 -fremap-arrays  
-inline-threshold=1000 -O3(gfortran) -O3(clang) -mavx2  
-madx -funroll-loops -ffast-math -fplugin=dragonegg.so  
-fplugin-arg-dragonegg-llvm-option="-merge-constant  
-inline-threshold:1000" -ljemalloc -lgfortran -lamdlibm
```

Benchmarks using both C and C++:

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

Benchmarks using Fortran, C, and C++:

```
-flto -Wl,-plugin-opt= -merge-constant  
-Wl,-plugin-opt=-lsr-in-nested-loop -Ofast -march=znver1  
-fstruct-layout=3 -mllvm -vectorize-memory-aggressively -mno-avx2  
-unroll-threshold=100 -fremap-arrays -inline-threshold=1000  
-finline-aggressive -O3 -mavx2 -madx -funroll-loops -ffast-math  
-fplugin=dragonegg.so  
-fplugin-arg-dragonegg-llvm-option="-merge-constant  
-inline-threshold:1000" -ljemalloc
```

The flags files that were used to format this result can be browsed at

<http://www.spec.org/cpu2017/flags/gcc.2017-11-20.html>
<http://www.spec.org/cpu2017/flags/aocc100-flags-revC-I.html>
<http://www.spec.org/cpu2017/flags/Sugon-Naples-Platform-Settings-revC-I.html>

You can also download the XML flags sources by saving the following links:

<http://www.spec.org/cpu2017/flags/gcc.2017-11-20.xml>
<http://www.spec.org/cpu2017/flags/aocc100-flags-revC-I.xml>
<http://www.spec.org/cpu2017/flags/Sugon-Naples-Platform-Settings-revC-I.xml>



SPEC CPU2017 Floating Point Rate Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

Sugon

SPECrate2017_fp_base = 125

Sugon A320-G30 (AMD EPYC 7601)

SPECrate2017_fp_peak = 132

CPU2017 License: 9046

Test Sponsor: Sugon

Tested by: Sugon

Test Date: Dec-2017

Hardware Availability: Dec-2017

Software Availability: Aug-2017

SPEC is a registered trademark 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 CPU2017 v1.0.2 on 2017-12-03 01:53:16-0500.

Report generated on 2019-02-20 21:10:09 by CPU2017 PDF formatter v6067.

Originally published on 2017-12-26.