## SPEC® CPU2017 Floating Point Speed Result

**Hewlett Packard Enterprise**  
(Test Sponsor: HPE)  
ProLiant DL385 Gen10  
(2.00 GHz, AMD EPYC 7702)

**SPECspeed2017_fp_base** = 191  
**SPECspeed2017_fp_peak** = Not Run

<table>
<thead>
<tr>
<th>Thread</th>
<th><strong>Threads</strong></th>
<th><strong>SPECspeed2017_fp_base</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>603.bwaves_s</td>
<td>128</td>
<td>382</td>
</tr>
<tr>
<td>607.cactuBSSN_s</td>
<td>128</td>
<td>72.2</td>
</tr>
<tr>
<td>619.ibm_s</td>
<td>128</td>
<td>112</td>
</tr>
<tr>
<td>621.wrf_s</td>
<td>128</td>
<td>169</td>
</tr>
<tr>
<td>627.cam4_s</td>
<td>128</td>
<td>64.4</td>
</tr>
<tr>
<td>628.pop2_s</td>
<td>128</td>
<td>319</td>
</tr>
<tr>
<td>638.imagick_s</td>
<td>128</td>
<td>407</td>
</tr>
<tr>
<td>644.nab_s</td>
<td>128</td>
<td>93.0</td>
</tr>
<tr>
<td>649.fotonik3d_s</td>
<td>128</td>
<td>330</td>
</tr>
<tr>
<td>654.roms_s</td>
<td>128</td>
<td>320</td>
</tr>
</tbody>
</table>

**Hardware**

- **CPU Name:** AMD EPYC 7702  
- **Max MHz.:** 3350  
- **Nominal:** 2000  
- **Enabled:** 128 cores, 2 chips  
- **Orderable:** 1, 2 chip(s)  
- **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 (16 x 64 GB 4Rx4 PC4-2933Y-L)  
- **Storage:** 1 x 400 GB SAS SSD, RAID 0  
- **Other:** None

**Software**

- **OS:** SUSE Linux Enterprise Server 15 (x86_64) SP1  
- **Kernel:** 4.12.14-195-default  
- **Compiler:** C/C++: Version 1.3.0 of AOCC  
- **Fortran:** Version 4.8.2 of GCC  
- **Parallel:** Yes  
- **Firmware:** HPE BIOS Version A40 07/11/2019 released Aug-2019  
- **File System:** xfs  
- **System State:** Run level 3 (multi-user)  
- **Base Pointers:** 64-bit  
- **Peak Pointers:** Not Applicable  
- **Other:** jemalloc: jemalloc memory allocator library V5.1.0;
# SPEC CPU2017 Floating Point Speed Result

## Hewlett Packard Enterprise

*Test Sponsor: HPE*

ProLiant DL385 Gen10

*(2.00 GHz, AMD EPYC 7702)*

**CPU2017 License:** 3  
**Test Sponsor:** HPE  
**Tested by:** HPE

---

### Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Threads</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Threads</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>603.bwaves_s</td>
<td>128</td>
<td>90.3</td>
<td>653</td>
<td>89.9</td>
<td>656</td>
<td>90.4</td>
<td>652</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>607.cactusBSSN_s</td>
<td>128</td>
<td>59.1</td>
<td>282</td>
<td>55.1</td>
<td>302</td>
<td>59.7</td>
<td>279</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>619.lbm_s</td>
<td>128</td>
<td>72.5</td>
<td>72.2</td>
<td>112</td>
<td>46.9</td>
<td>72.3</td>
<td>72.4</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>621.wrf_s</td>
<td>128</td>
<td>131</td>
<td>101</td>
<td>118</td>
<td>112</td>
<td>118</td>
<td>112</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>627.cam4_s</td>
<td>128</td>
<td>53.2</td>
<td>167</td>
<td>52.3</td>
<td>169</td>
<td>52.3</td>
<td>170</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>628.pop2_s</td>
<td>128</td>
<td>184</td>
<td>64.4</td>
<td>184</td>
<td>64.5</td>
<td>187</td>
<td>63.5</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>638.imagick_s</td>
<td>128</td>
<td>47.3</td>
<td>305</td>
<td>45.3</td>
<td>319</td>
<td>44.5</td>
<td>324</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>644.nab_s</td>
<td>128</td>
<td>42.9</td>
<td>407</td>
<td>42.9</td>
<td>407</td>
<td>43.1</td>
<td>405</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>649.fotonik3d_s</td>
<td>128</td>
<td>97.9</td>
<td>93.1</td>
<td>98.1</td>
<td>93.0</td>
<td>98.2</td>
<td>92.9</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>654.roms_s</td>
<td>128</td>
<td>47.6</td>
<td>331</td>
<td>47.7</td>
<td>330</td>
<td>47.7</td>
<td>330</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

---

**SPECspeed2017_fp_base = 191**  
**SPECspeed2017_fp_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/

The AOCC Fortran Plugin version 1.3.0 was used to leverage AOCC optimizers with gfortran. It is available here:  

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

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

---

(Continued on next page)
Operating System Notes (Continued)
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 set to 'always' for this run (OS default)

General Notes

Environment variables set by runcpu before the start of the run:
LD_LIBRARY_PATH = "/home/cpu2017/amd_speed_aocc130_naples_A_lib/64; /home/cpu2017/amd_speed_aocc130_naples_A_lib/32;"
OMP_DYNAMIC = "false"
OMP_PLACES = "cores"
OMP_PROC_BIND = "close"
OMP_SCHEDULE = "static"
OMP_STACKSIZE = "192M"
OMP_WAIT_POLICY = "active"

Binaries were compiled on a system with 2p AMD EPYC 7601 CPU + 512GB Memory using RHEL 7.6

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 Configuration
Thermal Configuration set to Maximum Cooling
AMD SMT Option set to Disabled
Determinism Control set to Manual
Performance Determinism set to Power Deterministic
Minimum Processor Idle Power Core C-State set to C6 State
Memory Patrol Scrubbing set to Disabled
Workload Profile set to General Peak Frequency Compute
NUMA memory domains per socket set to One memory domains per socket
Sysinfo program /home/cpu2017/bin/sysinfo
Rev: r5974 of 2018-05-19 9bcd8f2999c33d61f64985e45859ea9
running on dl385-gen10-rome-64c Thu Feb 14 08:23:35 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

(Continued on next page)
Hewlett Packard Enterprise  
(Test Sponsor: HPE)  
ProLiant DL385 Gen10  
(2.00 GHz, AMD EPYC 7702)  

| SPECspeed2017_fp_base = 191 | SPECspeed2017_fp_peak = Not Run |

CPU2017 License: 3  
Test Sponsor: HPE  
Tested by: HPE  

Test Date: Jul-2019  
Hardware Availability: Aug-2019  
Software Availability: Jun-2019  

Platform Notes (Continued)

From /proc/cpuinfo  
```
model name : AMD EPYC 7702 64-Core Processor
  2 "physical id"s (chips)
  128 "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 : 64
  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
```

From lscpu:  
```
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
Address sizes: 48 bits physical, 48 bits virtual
CPU(s): 128
On-line CPU(s) list: 0-127
Thread(s) per core: 1
Core(s) per socket: 64
Socket(s): 2
NUMA node(s): 2
Vendor ID: AuthenticAMD
CPU family: 23
Model: 49
Model name: AMD EPYC 7702 64-Core Processor
Stepping: 0
CPU MHz: 2000.000
CPU max MHz: 2000.0000
CPU min MHz: 1500.0000
BogoMIPS: 3992.29
Virtualization: AMD-V
L1d cache: 32K
L1i cache: 32K
L2 cache: 512K
L3 cache: 16384K
NUMA node0 CPU(s): 0-63
NUMA node1 CPU(s): 64-127
Flags: fpu vme de pse tsc msr pae mce cx8 apic sep mtrr pge mca cmov
pat pse36 clflush mmx mmxext fxsr sse sse2 ht syscall nx mmxext fxsr_opt pdpe1gb rdtscp lm
constant_tsc rep_good nopl xtopology nonstop_tsc cpuid extd_apicid aperfmperf pni
pclmulqdq monitor ssse3 fma cx16 sse4_1 sse4_2 movbe popcnt aes xsave avx f16c
```

(Continued on next page)
Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL385 Gen10
(2.00 GHz, AMD EPYC 7702)

SPEC CPU2017 Floating Point Speed Result

Copyright 2017-2019 Standard Performance Evaluation Corporation

SPECspeed2017_fp_base = 191
SPECspeed2017_fp_peak = Not Run

CPU2017 License: 3
Test Sponsor: HPE
Tested by: HPE
Test Date: Jul-2019
Hardware Availability: Aug-2019
Software Availability: Jun-2019

Platform Notes (Continued)

rdrand lahf_lm cmp_legacy svm extapic cr8_legacy abm sse4a misalignsse 3dnowprefetch
osvw ibs skinit topoext perfctr_core perfctr_nb bpext perfctr_12 mwaitx cpb
cat_l3 cdp_l3 hw_pstate ssbd ibrs ibpb stibp vmmcall fsqsgbase bmi1 avx2 smep bmi2
cqm rdt_a rdseed adx smap clflushopt clwb sha Ni xsaveopt xsavevt xgetbv1 xsaves
cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local clzero irperf xsaverpr arat npt
lbrv svm_lock hri_save tsc_scale vmcb_clean flushbyasid decodeassist pausefilter
pfthreshold avic v_vmsave_vmload vfq 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: 2 nodes (0-1)
node 0 cpus: 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
node 0 size: 515747 MB
node 0 free: 514980 MB
node 1 cpus: 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88
89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112
113 114 115 116 117 118 119 120 121 122 123 124 125 126 127
node 1 size: 515868 MB
node 1 free: 515411 MB
node distances:
node 0 1
0: 10 32
1: 32 10

From /proc/meminfo
MemTotal: 1056374756 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"
CPE_NAME="cpe:/o:suse:sles:15:sp1"

uname -a:
Linux dl385-gen10-rome-64c 4.12.14-195-default #1 SMP Tue May 7 10:55:11 UTC 2019

(Continued on next page)
Hewlett Packard Enterprise

ProLiant DL385 Gen10
(2.00 GHz, AMD EPYC 7702)

SPECspeed2017_fp_base = 191
SPECspeed2017_fp_peak = Not Run

Platform Notes (Continued)

(8fba516) x86_64 x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:

CVE-2017-5754 (Meltdown): Not affected
CVE-2017-5753 (Spectre variant 1): Mitigation: __user pointer sanitization
CVE-2017-5715 (Spectre variant 2): Mitigation: Full AMD retpoline, IBPB: conditional, IBRS_FW, STIBP: disabled, RSB filling

run-level 3 Feb 14 08:21
SPEC is set to: /home/cpu2017
Filesystem Type Size Used Avail Use% Mounted on
/dev/sda2 btrfs 371G 67G 303G 19% /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 HPE A40 07/11/2019
Memory:
  16x HPE P03054-091 64 GB 4 rank 2933
  16x UNKNOWN NOT AVAILABLE

(End of data from sysinfo program)

Compiler Version Notes

==============================================================================
CC  619.lbm_s(base) 638.imagick_s(base) 644.nab_s(base)
==============================================================================
AOCC.LLVM.1.3.0.B34.2018_10_22 clang version 7.0.0 (CLANG: Jenkins
  AOCC_1_3_0_Release-Build#34) (based on LLVM AOCC.LLVM.1.3.0.B34.2018_10_22)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /root/work/compilers/aocc1.3.0/AOCC-1.3.0-Compiler/bin
==============================================================================
FC  607.cactuBSSN_s(base)
==============================================================================
AOCC.LLVM.1.3.0.B34.2018_10_22 clang version 7.0.0 (CLANG: Jenkins
  AOCC_1_3_0_Release-Build#34) (based on LLVM AOCC.LLVM.1.3.0.B34.2018_10_22)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /root/work/compilers/aocc1.3.0/AOCC-1.3.0-Compiler/bin
==============================================================================

(Continued on next page)
Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL385 Gen10
(2.00 GHz, AMD EPYC 7702)

CPU2017 License: 3
Test Sponsor: HPE
Tested by: HPE

SPECspeed2017_fp_base = 191
SPECspeed2017_fp_peak = Not Run

Compiler Version Notes (Continued)

AOCC.LLVM.1.3.0.B34.2018_10_22 clang version 7.0.0 (CLANG: Jenkins
AOCC_1_3_0_Release-Build#34) (based on LLVM AOCC.LLVM.1.3.0.B34.2018_10_22)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /root/work/compilers/aocc1.3.0/AOCC-1.3.0-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  603.bwaves_s(base) 649.fotonik3d_s(base) 654.roms_s(base)
------------------------------------------------------------------------------
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  621.wrf_s(base) 627.cam4_s(base) 628.pop2_s(base)
------------------------------------------------------------------------------
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.1.3.0.B34.2018_10_22 clang version 7.0.0 (CLANG: Jenkins
AOCC_1_3_0_Release-Build#34) (based on LLVM AOCC.LLVM.1.3.0.B34.2018_10_22)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /root/work/compilers/aocc1.3.0/AOCC-1.3.0-Compiler/bin

Base Compiler Invocation

C benchmarks:
clang

(Continued on next page)
Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL385 Gen10
(2.00 GHz, AMD EPYC 7702)

SPECspeed2017_fp_base = 191
SPECspeed2017_fp_peak = Not Run

CPU2017 License: 3
Test Sponsor: HPE
Tested by: HPE

Test Date: Jul-2019
Hardware Availability: Aug-2019
Software Availability: Jun-2019

Base Compiler Invocation (Continued)

Fortran benchmarks:
clang gfortran

Benchmarks using both Fortran and C:
clang gfortran

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

Base Portability Flags

603.bwaves_s: -DSPEC_LP64
607.cactuBSSN_s: -DSPEC_LP64
619.lbm_s: -DSPEC_LP64
621.wrf_s: -DSPEC_CASE_FLAG -fconvert=big-endian -DSPEC_LP64
627.cam4_s: -DSPEC_CASE_FLAG -DSPEC_LP64
628.pop2_s: -DSPEC_CASE_FLAG -fconvert=big-endian -DSPEC_LP64
638.imagick_s: -DSPEC_LP64
644.nab_s: -DSPEC_LP64
649.fotonik3d_s: -DSPEC_LP64
654.roms_s: -DSPEC_LP64

Base Optimization Flags

C benchmarks:
-flto -W1,-plugin-opt=-merge-constant
-W1,-plugin-opt=-lsl-in-nested-loop
-W1,-plugin-opt=-enable-vectorize-compares=false -O3 -ffast-math
-march=znver1 -mno-avx2 -fstruct-layout=3 -mllvm -unroll-threshold=50
-fremap-arrays -mllvm -inline-threshold=1000
-flv-function-specialization -mllvm -enable-gvn-hoist
-mllvm -function-specialize -z muldefs -DSPEC_OPENMP -fopenmp
-fopenmp=libomp -lomp -lpthread -ldl -ljemalloc -lamdlibm

Fortran benchmarks:
-flto -W1,-plugin-opt=-merge-constant
-W1,-plugin-opt=-lsl-in-nested-loop
-W1,-plugin-opt=-enable-vectorize-compares=false -O3 -mavx -madx
-funroll-loops -ffast-math -z muldefs -fplugin=dragonegg.so
-fplugin-arg-dragonegg-llvm-option=-merge-constant
-fplugin-arg-dragonegg-llvm-option=-enable-vectorize-compares=false
-DSPEC_OPENMP -fopenmp -fopenmp=libomp -lomp -lpthread -ldl

(Continued on next page)
SPEC CPU2017 Floating Point Speed Result

Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL385 Gen10
(2.00 GHz, AMD EPYC 7702)

| SPECspeak2017_fp_base = 191 |
| SPECspeak2017_fp_peak = Not Run |

CPU2017 License: 3
Test Sponsor: HPE
Tested by: HPE
Test Date: Jul-2019
Hardware Availability: Aug-2019
Software Availability: Jun-2019

Base Optimization Flags (Continued)

Fortran benchmarks (continued):
-llmalloc -lamdlibm -lgfortran

Benchmarks using both Fortran and C:
-fflto -Wl,-plugin-opt=-merge-constant
-Wl,-plugin-opt=-lsr-in-nested-loop
-Wl,-plugin-opt=-enable-vectorize-compare=false -O3 -ffast-math
-march=znver1 -mno-avx2 -fstruct-layout=3 -mllvm -unroll-threshold=50
-fremap-arrays -mllvm -inline-threshold=1000
-flv-function-specialization -mllvm -enable-gvn-hoist
-mlvm -function-specialize -mavx -madx -funroll-loops -z muldefs
-fplugin=dragonegg.so -fplugin-arg-dragonegg-llvm-option=-merge-constant
-fplugin-arg-dragonegg-llvm-option=-enable-vectorize-compare=false
-DSPEC_OPENMP -fopenmp -fopenmp=libomp -lomp -lpthread -ldl
-llmalloc -lamdlibm -lgfortran

Benchmarks using Fortran, C, and C++:
-std=c++98 -fflto -Wl,-plugin-opt=-merge-constant
-Wl,-plugin-opt=-lsr-in-nested-loop
-Wl,-plugin-opt=-enable-vectorize-compare=false -O3 -ffast-math
-march=znver1 -mno-avx2 -fstruct-layout=3 -mllvm -unroll-threshold=50
-fremap-arrays -mllvm -inline-threshold=1000
-flv-function-specialization -mllvm -enable-gvn-hoist
-mlvm -function-specialize -mllvm -unroll-threshold=100
-finline-aggressive -mllvm -enable-vectorize-compare=false -mavx
-madx -funroll-loops -z muldefs -fplugin=dragonegg.so
-fplugin-arg-dragonegg-llvm-option=-merge-constant
-fplugin-arg-dragonegg-llvm-option=-enable-vectorize-compare=false
-DSPEC_OPENMP -fopenmp -fopenmp=libomp -lomp -lpthread -ldl
-llmalloc -lamdlibm

Base Other Flags

C benchmarks:
-Wno-return-type -DUSE_OPENMP

Fortran benchmarks:
-DUSE_OPENMP -Wno-return-type

Benchmarks using both Fortran and C:
-DUSE_OPENMP -Wno-return-type

Benchmarks using Fortran, C, and C++:
-Wno-return-type -DUSE_OPENMP
 SPEC CPU2017 Floating Point Speed Result
Copyright 2017-2019 Standard Performance Evaluation Corporation

Hewlett Packard Enterprise
(Test Sponsor: HPE)
ProLiant DL385 Gen10
(2.00 GHz, AMD EPYC 7702)

<table>
<thead>
<tr>
<th>SPECspeed2017_fp_base = 191</th>
</tr>
</thead>
<tbody>
<tr>
<td>SPECspeed2017_fp_peak = Not Run</td>
</tr>
</tbody>
</table>

CPU2017 License: 3
Test Sponsor: HPE
Tested by: HPE

Test Date: Jul-2019
Hardware Availability: Aug-2019
Software Availability: Jun-2019

The flags files that were used to format this result can be browsed at
http://www.spec.org/cpu2017/flags/HPE-Platform-Flags-AMD-V1.2-EPYC-revE.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/HPE-Platform-Flags-AMD-V1.2-EPYC-revE.xml

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 v1.0.5 on 2019-02-14 09:23:35-0500.
Report generated on 2019-08-07 19:27:02 by CPU2017 PDF formatter v6067.
Originally published on 2019-08-07.