SPEC CPU®2017 Floating Point Speed Result

Dell Inc.

PowerEdge R7525 (AMD EPYC 7F52, 3.50 GHz)

CPU2017 License: 55
Test Sponsor: Dell Inc.
Tested by: Dell Inc.

Test Date: Apr-2020
Hardware Availability: Jul-2020
Software Availability: Aug-2019

Threads

<table>
<thead>
<tr>
<th>Spec Benchmark</th>
<th>Threads</th>
<th>SPECspeed®2017_fp_base</th>
<th>SPECspeed®2017_fp_peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>603.bwaves_s</td>
<td>32</td>
<td>151</td>
<td>232</td>
</tr>
<tr>
<td>607.cactuBSSN_s</td>
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<tr>
<td>619.lbm_s</td>
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<td></td>
</tr>
<tr>
<td>621.wrf_s</td>
<td>32</td>
<td>74.7</td>
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<tr>
<td>627.cam4_s</td>
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<tr>
<td>628.pop2_s</td>
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<tr>
<td>638.imagick_s</td>
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<tr>
<td>644.nab_s</td>
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</tr>
<tr>
<td>649.fotonik3d_s</td>
<td>32</td>
<td>86.2</td>
<td></td>
</tr>
<tr>
<td>654.roms_s</td>
<td>32</td>
<td>87.7</td>
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</tr>
</tbody>
</table>

Hardware

CPU Name: AMD EPYC 7F52
Max MHz: 3900
Nominal: 3500
Enabled: 32 cores, 2 chips
Orderable: 1.2 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 per core
Other: None
Memory: 512 GB (16 x 32 GB 2Rx4 PC4-3200AA-R, running at 3200)
Storage: 1 x 960 GB SATA SSD
Other: None

Software

OS: SUSE Linux Enterprise Server 15 SP1
Compiler: C/C++/Fortran: Version 2.0.0 of AOCC
Parallel: Yes
Firmware: Version 1.4.6 released Apr-2020
File System: tmpfs
System State: Run level 3 (multi-user)
Base Pointers: 64-bit
Peak Pointers: 64-bit
Other: jemalloc: jemalloc memory allocator library v5.1.0
Power Management: BIOS set to prefer performance at the cost of additional power usage.
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SPECspeed®2017_fp_base = 129
SPECspeed®2017_fp_peak = 130

Results Table

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Threads</th>
<th>Seconds</th>
<th>Ratio</th>
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SPECspeed®2017_fp_base = 129
SPECspeed®2017_fp_peak = 130

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

dirty_ratio, swappiness, zone_reclaim_mode and drop_caches were
all set using privileged echo (e.g. echo 8 > /proc/sys/vm/dirty_ratio).

Transparent huge pages set to 'always' for this run (OS default)
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**Dell Inc.**

**PowerEdge R7525 (AMD EPYC 7F52, 3.50 GHz)**

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**CPU2017 License:** 55  
**Test Sponsor:** Dell Inc.  
**Tested by:** Dell Inc.  
**Test Date:** Apr-2020  
**Hardware Availability:** Jul-2020  
**Software Availability:** Aug-2019

## Environment Variables Notes

Environment variables set by runcpu before the start of the run:

- `GOMP_CPU_AFFINITY = "0-31"`
- `LD_LIBRARY_PATH = "/mnt/ramdisk/cpu2017-1.1.0/amd_speed_aocc200_rome_C_lib/64;/mnt/ramdisk/cpu2017-1.1.0/amd_speed_aocc200_rome_C_lib/32:"`
- `MALLOC_CONF = "retain:true"
- `OMP_DYNAMIC = "false"
- `OMP_SCHEDULE = "static"
- `OMP_STACKSIZE = "128M"
- `OMP_THREAD_LIMIT = "32"

Environment variables set by runcpu during the 621.wrf_s peak run:

- `GOMP_CPU_AFFINITY = "0 1 17 2 18 3 19 4 20 5 21 6 22 7 23 8 24 9 25 10 26 11 27 12 28 13 29 14 30 15 31"

Environment variables set by runcpu during the 628.pop2_s peak run:

- `GOMP_CPU_AFFINITY = "0-31"

Environment variables set by runcpu during the 649.fotonik3d_s peak run:

- `GOMP_CPU_AFFINITY = "0-31"

## General Notes

Binaries were compiled on a system with 2x AMD EPYC 7601 CPU + 512GB Memory using Fedora 26.

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.

Benchmark run from a 225 GB ramdisk created with the cmd; "mount -t tmpfs -o size=225G tmpfs /mnt/ramdisk".  
jemalloc: configured and built with GCC v9.1.0 in Ubuntu 19.04 with -O3 -znver2 -flto  
jemalloc 5.1.0 is available here:
https://github.com/jemalloc/jemalloc/releases/download/5.1.0/jemalloc-5.1.0.tar.bz2

## Platform Notes

- BIOS settings:  
  - NUMA Nodes Per Socket set to 4  
  - CCX as NUMA Domain set to Enabled  
  - System Profile set to Custom  
  - CPU Power Management set to Maximum Performance  
  - Memory Frequency set to Maximum Performance

(Continued on next page)
Dell Inc.

PowerEdge R7525 (AMD EPYC 7F52, 3.50 GHz)

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Platform Notes (Continued)

Turbo Boost Enabled
Cstates set to Enabled
Memory Patrol Scrub Disabled
Memory Refresh Rate set to 1x
PCI ASPM L1 Link Power Management Disabled
Determinism Slider set to Power Determinism
Efficiency Optimized Mode Disabled
Memory Interleaving set to Auto
ApbDis set to Disabled
DLWM set to Unforced
Logical Processor Disabled

Sysinfo program /mnt/ramdisk/cpu2017-1.1.0/bin/sysinfo
Rev: r6365 of 2019-08-21 295195f888a3d7ed1e6e46a485a0011
running on linux-g3ob Fri Apr 24 14:57:22 2020

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 7F52 16-Core Processor
  2 "physical id"s (chips)
  32 "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 : 16
physical 0: cores 0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60
physical 1: cores 0 4 8 12 16 20 24 28 32 36 40 44 48 52 56 60

From lscpu:
Architecture: x86_64
CPU op-mode(s): 32-bit, 64-bit
Byte Order: Little Endian
Address sizes: 43 bits physical, 48 bits virtual
CPU(s): 32
On-line CPU(s) list: 0-31
Thread(s) per core: 1
Core(s) per socket: 16
Socket(s): 2
NUMA node(s): 32
Vendor ID: AuthenticAMD
CPU family: 23
Model: 49
Model name: AMD EPYC 7F52 16-Core Processor
Stepping: 0

(Continued on next page)
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**Platform Notes (Continued)**

- **CPU MHz:** 3493.596
- **BogoMIPS:** 6987.19
- **Virtualization:** AMD-V
- **L1d cache:** 32K
- **L1i cache:** 32K
- **L2 cache:** 512K
- **L3 cache:** 16384K
- **NUMA node0 CPU(s):** 0
- **NUMA node1 CPU(s):** 1
- **NUMA node2 CPU(s):** 2
- **NUMA node3 CPU(s):** 3
- **NUMA node4 CPU(s):** 4
- **NUMA node5 CPU(s):** 5
- **NUMA node6 CPU(s):** 6
- **NUMA node7 CPU(s):** 7
- **NUMA node8 CPU(s):** 8
- **NUMA node9 CPU(s):** 9
- **NUMA node10 CPU(s):** 10
- **NUMA node11 CPU(s):** 11
- **NUMA node12 CPU(s):** 12
- **NUMA node13 CPU(s):** 13
- **NUMA node14 CPU(s):** 14
- **NUMA node15 CPU(s):** 15
- **NUMA node16 CPU(s):** 16
- **NUMA node17 CPU(s):** 17
- **NUMA node18 CPU(s):** 18
- **NUMA node19 CPU(s):** 19
- **NUMA node20 CPU(s):** 20
- **NUMA node21 CPU(s):** 21
- **NUMA node22 CPU(s):** 22
- **NUMA node23 CPU(s):** 23
- **NUMA node24 CPU(s):** 24
- **NUMA node25 CPU(s):** 25
- **NUMA node26 CPU(s):** 26
- **NUMA node27 CPU(s):** 27
- **NUMA node28 CPU(s):** 28
- **NUMA node29 CPU(s):** 29
- **NUMA node30 CPU(s):** 30
- **NUMA node31 CPU(s):** 31

**Flags:**

fpu vme de pse tsc msr pae mca cmov pat pse36 clflush mmx fxsr sse sse2 ht syscall nx mmxext fxsr_opt pdpe1gb rdtscp lm constant_tsc rep_good nopl xtopology nonstop_tsc cpuid extd_apicid aperfmpref pni pclmulqdq monitor ssse3 fma cx16 sse4_1 sse4_2 x2apic movbe popcnt aes xsave avx f16c rdrand lahf_lm cmp_legacy svm extapic cr8_legacy abm sse4a misalignsse 3dnowprefetch osvw ibs skinit wdt tce topoext perfctr_core perfctr_nb bpext perfctr_l2 mwaitx cpb cat_l3 cdp_l3 hw_pstate sme sabd sev ibrs ibpb stibp vmmcalf fsqsbased bml avx2 smep bmi2 cmq rdt_a rdseed adx smap clflushopt clwb sha ni

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Platform Notes (Continued)

```
xsaveopt xsaves xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbm_total cqm_mbm_local
clzero irperf xsaveeptr arat npt lbv svm_lock nrip_save tsc_scale vmcb_clean
flushbyasic decodeassist pausefilter pfthreashold 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: 32 nodes (0-31)
  node 0 cpus: 0
  node 0 size: 15547 MB
  node 0 free: 15486 MB
  node 1 cpus: 1
  node 1 size: 16127 MB
  node 1 free: 16103 MB
  node 2 cpus: 2
  node 2 size: 16127 MB
  node 2 free: 16089 MB
  node 3 cpus: 3
  node 3 size: 16126 MB
  node 3 free: 16098 MB
  node 4 cpus: 4
  node 4 size: 16098 MB
  node 4 free: 16057 MB
  node 5 cpus: 5
  node 5 size: 16127 MB
  node 5 free: 16090 MB
  node 6 cpus: 6
  node 6 size: 16127 MB
  node 6 free: 16108 MB
  node 7 cpus: 7
  node 7 size: 16126 MB
  node 7 free: 16090 MB
  node 8 cpus: 8
  node 8 size: 16127 MB
  node 8 free: 16104 MB
  node 9 cpus: 9
  node 9 size: 16127 MB
  node 9 free: 16094 MB
  node 10 cpus: 10
  node 10 size: 16127 MB
  node 10 free: 16103 MB
  node 11 cpus: 11
  node 11 size: 16126 MB
  node 11 free: 16104 MB
```

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node 12 cpus: 12
node 12 size: 16127 MB
node 12 free: 16105 MB
node 13 cpus: 13
node 13 size: 16127 MB
node 13 free: 16109 MB
node 14 cpus: 14
node 14 size: 16127 MB
node 14 free: 16108 MB
node 15 cpus: 15
node 15 size: 16114 MB
node 15 free: 16091 MB
node 16 cpus: 16
node 16 size: 16127 MB
node 16 free: 16107 MB
node 17 cpus: 17
node 17 size: 16127 MB
node 17 free: 16108 MB
node 18 cpus: 18
node 18 size: 16127 MB
node 18 free: 16111 MB
node 19 cpus: 19
node 19 size: 16126 MB
node 19 free: 16107 MB
node 20 cpus: 20
node 20 size: 16127 MB
node 20 free: 16107 MB
node 21 cpus: 21
node 21 size: 16127 MB
node 21 free: 16112 MB
node 22 cpus: 22
node 22 size: 16127 MB
node 22 free: 16113 MB
node 23 cpus: 23
node 23 size: 16126 MB
node 23 free: 16110 MB
node 24 cpus: 24
node 24 size: 16127 MB
node 24 free: 14169 MB
node 25 cpus: 25
node 25 size: 16127 MB
node 25 free: 16089 MB
node 26 cpus: 26
node 26 size: 16127 MB
node 26 free: 11637 MB
node 27 cpus: 27
node 27 size: 16126 MB

(Continued on next page)
### Platform Notes (Continued)

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</table>

(Continued on next page)
Dell Inc.

PowerEdge R7525 (AMD EPYC 7F52, 3.50 GHz)

SPECspeed\textsuperscript{2017}_\textit{fp}_\textit{peak} = 130

SPECspeed\textsuperscript{2017}_\textit{fp}_\textit{base} = 129

<table>
<thead>
<tr>
<th>CPU2017 License</th>
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<th>Tested by</th>
<th>Test Date</th>
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<th>Software Availability</th>
</tr>
</thead>
</table>

**Platform Notes (Continued)**

From /proc/meminfo

<table>
<thead>
<tr>
<th>MemTotal:</th>
<th>527825808 kB</th>
</tr>
</thead>
<tbody>
<tr>
<td>HugePages_Total:</td>
<td>0</td>
</tr>
<tr>
<td>Hugepagesize:</td>
<td>2048 kB</td>
</tr>
</tbody>
</table>

From /etc/*release* /etc/*version*

```
NAME="SLES"
VERSION="15-SP1"
VERSION_ID="15.1"
PRETTY_NAME="SUSE Linux Enterprise Server 15 SP1"
ID="sles"
ID_LIKE="suse"
```

(Continued on next page)
Dell Inc.

PowerEdge R7525 (AMD EPYC 7F52, 3.50 GHz)

### SPEC CPU 2017 Floating Point Speed Result

**SPECspeed®2017_fp_base** = 129

**SPECspeed®2017_fp_peak** = 130

- **CPU2017 License**: 55
- **Test Sponsor**: Dell Inc.
- **Tested by**: Dell Inc.
- **Test Date**: Apr-2020
- **Hardware Availability**: Jul-2020
- **Software Availability**: Aug-2019

---

**Platform Notes (Continued)**

```text
ANSI_COLOR="0;32"
CPE_NAME="cpe:/o:suse:sles:15:spl"

uname -a:
Linux linux-g3ob 4.12.14-195-default #1 SMP Tue May 7 10:55:11 UTC 2019 (8fba516)
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: __user pointer sanitization
- CVE-2017-5715 (Spectre variant 2): Mitigation: Full AMD retpoline, IBPB: conditional, IBRS_FW, STIBP: disabled, RSB filling

run-level 3 Apr 24 11:51 last=5

SPEC is set to: /mnt/ramdisk/cpu2017-1.1.0

<table>
<thead>
<tr>
<th>Filesystem</th>
<th>Type</th>
<th>Size</th>
<th>Used</th>
<th>Avail</th>
<th>Use%</th>
<th>Mounted on</th>
</tr>
</thead>
<tbody>
<tr>
<td>tmpfs</td>
<td>tmpfs</td>
<td>225G</td>
<td>4.3G</td>
<td>221G</td>
<td>2%</td>
<td>/mnt/ramdisk</td>
</tr>
</tbody>
</table>

From /sys/devices/virtual/dmi/id
- BIOS: Dell Inc. 1.4.6 04/10/2020
- Vendor: Dell Inc.
- Product: PowerEdge R7525
- Product Family: PowerEdge
- Serial: 48LN333

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 802C80B3802C 36ASF4G72PZ-3G2E7 32 GB 2 rank 3200
- 16x Not Specified Not Specified

(End of data from sysinfo program)

---

**Compiler Version Notes**

==============================================================================
C | 619.lbm_s(base, peak) 638.imagick_s(base, peak)

(Continued on next page)
### Dell Inc.

**PowerEdge R7525 (AMD EPYC 7F52, 3.50 GHz)**

| SPECspeed®2017_fp_base = 129 | SPECspeed®2017_fp_peak = 130 |

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**Compiler Version Notes (Continued)**

<table>
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<tr>
<th>644.nab_s(base, peak)</th>
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<tbody>
<tr>
<td>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)</td>
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<tr>
<td>Target: x86_64-unknown-linux-gnu</td>
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<tr>
<td>Thread model: posix</td>
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<tr>
<td>InstalledDir: /sppo/dev/compilers/aocc-compiler-2.0.0/bin</td>
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</table>

C++, C, Fortran | 607.cactuBSSN_s(base, peak)

<table>
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<tr>
<th>603.bwaves_s(base, peak) 649.fotonik3d_s(base, peak) 654.roms_s(base, peak)</th>
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<tr>
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Fortran, C | 621.wrf_s(base, peak) 627.cam4_s(base, peak) 628.pop2_s(base, peak)

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Dell Inc.
PowerEdge R7525 (AMD EPYC 7F52, 3.50 GHz)

**SPECspeed®2017_fp_base = 129**
**SPECspeed®2017_fp_peak = 130**

CPU2017 License: 55
Test Sponsor: Dell Inc.
Tested by: Dell Inc.

Test Date: Apr-2020
Hardware Availability: Jul-2020
Software Availability: Aug-2019

---

**Compiler Version Notes (Continued)**

Thread model: posix
InstalledDir: /sppo/dev/compilers/aocc-compiler-2.0.0/bin
AOCC.LLVM.2.0.0.B191.2019_07_19 clang version 8.0.0 (CLANG: Jenkins
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Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /sppo/dev/compilers/aocc-compiler-2.0.0/bin

---

**Base Compiler Invocation**

C benchmarks:
clang

Fortran benchmarks:
flang

Benchmarks using both Fortran and C:
flang clang

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

---

**Base Portability Flags**

603.bwaves_s: -DSPEC_LP64
607.cactuBSSN_s: -DSPEC_LP64
619.lbm_s: -DSPEC_LP64
621.wrf_s: -DSPEC_CASE_FLAG -Mbyteswapio -DSPEC_LP64
627.cam4_s: -DSPEC_CASE_FLAG -DSPEC_LP64
628.pop2_s: -DSPEC_CASE_FLAG -Mbyteswapio -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 -Wl,-mlllvm -Wl,-function-specialize
-Wl,-mlllvm -Wl,-region-vectorize -Wl,-mlllvm -Wl,-vector-library=LIBMVEC

(Continued on next page)
Base Optimization Flags (Continued)

C benchmarks (continued):
-Wl,-mlllvm -Wl,-reduce-array-computations=3 -O3 -ffast-math
-march=znver2 -fstruct-layout=3 -mlllvm -unroll-threshold=50
-fremap-arrays -mlllvm -function-specialize -mlllvm -enable-gvn-hoist
-mlllvm -reduce-array-computations=3 -mlllvm -global-vectorize-slp
-mlllvm -vector-library=LIBMVEC -mlllvm -inline-threshold=1000
-fly-function-specialization -z muldefs -DSPEC_OPENMP -fopenmp
-fopenmp=libomp -lomp -lpthread -ldl -lmvec -lamdlibm -ljemalloc
-lflang

Fortran benchmarks:
-fflto -Wl,-mlllvm -Wl,-function-specialize
-Wl,-mlllvm -Wl,-region-vectorize -Wl,-mlllvm -Wl,-vector-library=LIBMVEC
-Wl,-mlllvm -Wl,-reduce-array-computations=3 -O3 -march=znver2
-funroll-loops -Mrecursive -mlllvm -vector-library=LIBMVEC -z muldefs
-Kieee -fno-finite-math-only -DSPEC_OPENMP -fopenmp -fopenmp=libomp
-lomp -lpthread -ldl -lmvec -lamdlibm -ljemalloc -lflang

Benchmarks using both Fortran and C:
-fflto -Wl,-mlllvm -Wl,-function-specialize
-Wl,-mlllvm -Wl,-region-vectorize -Wl,-mlllvm -Wl,-vector-library=LIBMVEC
-Wl,-mlllvm -Wl,-reduce-array-computations=3 -O3 -ffast-math
-march=znver2 -fstruct-layout=3 -mlllvm -unroll-threshold=50
-fremap-arrays -mlllvm -function-specialize -mlllvm -enable-gvn-hoist
-mlllvm -reduce-array-computations=3 -mlllvm -global-vectorize-slp
-mlllvm -vector-library=LIBMVEC -mlllvm -inline-threshold=1000
-fly-function-specialization -funroll-loops -Mrecursive -z muldefs
-Kieee -fno-finite-math-only -DSPEC_OPENMP -fopenmp -fopenmp=libomp
-lomp -lpthread -ldl -lmvec -lamdlibm -ljemalloc -lflang

Benchmarks using Fortran, C, and C++:
-std=c++98 -fflto -Wl,-mlllvm -Wl,-function-specialize
-Wl,-mlllvm -Wl,-region-vectorize -Wl,-mlllvm -Wl,-vector-library=LIBMVEC
-Wl,-mlllvm -Wl,-reduce-array-computations=3
-Wl,-mlllvm -Wl,-suppress-fmas -O3 -ffast-math -march=znver2
-fstruct-layout=3 -mlllvm -unroll-threshold=50 -fremap-arrays
-mlllvm -function-specialize -mlllvm -enable-gvn-hoist
-mlllvm -reduce-array-computations=3 -mlllvm -global-vectorize-slp
-mlllvm -vector-library=LIBMVEC -mlllvm -inline-threshold=1000
-fly-function-specialization -mlllvm -loop-unswitch-threshold=200000
-mlllvm -unroll-threshold=100 -mlllvm -enable-partial-unswitch
-funroll-loops -Mrecursive -z muldefs -Kieee -fno-finite-math-only
-DSPEC_OPENMP -fopenmp -fopenmp=libomp -lomp -lpthread -ldl -lmvec
-lamdlibm -ljemalloc -lflang
SPEC CPU®2017 Floating Point Speed Result

Dell Inc.

PowerEdge R7525 (AMD EPYC 7F52, 3.50 GHz)

SPECspeed®2017_fp_base = 129
SPECspeed®2017_fp_peak = 130

CPU2017 License: 55
Test Sponsor: Dell Inc.
Test Date: Apr-2020
Tested by: Dell Inc.
Hardware Availability: Jul-2020
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Base Other Flags

C benchmarks:
- Wno-return-type

Fortran benchmarks:
- Wno-return-type

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

Benchmarks using Fortran, C, and C++:
- Wno-return-type

Peak Compiler Invocation

C benchmarks:
clang

Fortran benchmarks:
flang

Benchmarks using both Fortran and C:
flang clang

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

Peak Portability Flags

Same as Base Portability Flags

Peak Optimization Flags

C benchmarks:
619.lbm_s: basepeak = yes
638.imagick_s: basepeak = yes
644.nab_s: basepeak = yes

(Continued on next page)
Dell Inc.

PowerEdge R7525 (AMD EPYC 7F52, 3.50 GHz)

SPECspeed®2017_fp_base = 129
SPECspeed®2017_fp_peak = 130

SPECCPU®2017 Floating Point Speed Result
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CPU2017 License: 55
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Software Availability: Aug-2019

Peak Optimization Flags (Continued)

Fortran benchmarks:

603.bwaves_s: basepeak = yes


654.roms_s: basepeak = yes

Benchmarks using both Fortran and C:


627.cam4_s: basepeak = yes

628.pop2_s: Same as 621.wrf_s

Benchmarks using Fortran, C, and C++:

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Dell Inc.
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Fortran benchmarks:
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Benchmarks using both Fortran and C:
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The flags files that were used to format this result can be browsed at

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