Dell Inc. PowerEdge R6615 (AMD EPYC 9374F 32-Core Processor)

<table>
<thead>
<tr>
<th>SPECrate®2017_fp_base = 477</th>
<th>SPECrate®2017_fp_peak = Not Run</th>
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</thead>
</table>

CPU2017 License: 6573
Test Sponsor: Dell Inc.
Test Date: Dec-2022
Hardware Availability: Dec-2022
Software Availability: Nov-2022

### Hardware

- **CPU Name:** AMD EPYC 9374F
- **Max MHz:** 4300
- **Nominal:** 3850
- **Enabled:** 32 cores, 1 chip, 2 threads/core
- **Orderable:** 1 chip
- **Cache L1:** 32 KB I + 32 KB D on chip per core
- **L2:** 1 MB I+D on chip per core
- **L3:** 256 MB I+D on chip per chip, 32 MB shared / 4 cores
- **Memory:** 768 GB (12 x 64 GB 2Rx4 PC5-4800B-R)
- **Storage:** 125 GB on tmpfs
- **Other:** None

### Software

- **OS:** Ubuntu 22.04.1 LTS
- **Compiler:** C/C++/Fortran: Version 4.0.0 of AOCC
- **Parallel:** No
- **Firmware:** Version 1.1.0 released Nov-2022
- **File System:** tmpfs
- **System State:** Run level 3 (multi-user)
- **Base Pointers:** 64-bit
- **Peak Pointers:** Not Applicable
- **Other:** None
- **Power Management:** BIOS and OS set to prefer performance at the cost of additional power usage.

---

503.bwaves_r 64
507.cactuBSSN_r 64
508.namd_r 64
510.parest_r 64
511.povray_r 64
519.lbm_r 64
521.wrf_r 64
526.blender_r 64
527.cam4_r 64
538.imagick_r 64
544.nab_r 64
549.fotonik3d_r 64
554.roms_r 64

SPECrates 2017_fp_base (477)
Dell Inc.  

PowerEdge R6615 (AMD EPYC 9374F 32-Core Processor)  

RESULTS

SPECrate®2017_fp_base = 477
SPECrate®2017_fp_peak = Not Run

CPU2017 License: 6573
Test Sponsor: Dell Inc.
Test Date: Dec-2022
Hardware Availability: Dec-2022
Tested by: Dell Inc.
Software Availability: Nov-2022

Results Table

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</tbody>
</table>

SPECCrate®2017_fp_base = 477
SPECCrate®2017_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/

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 limit
'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>

To limit dirty cache to 8% of memory, 'sysctl -w vm.dirty_ratio=8' run as root.
To limit swap usage to minimum necessary, 'sysctl -w vm.swappiness=1' run as root.
To free node-local memory and avoid remote memory usage,
'sysctl -w vm.zone_reclaim_mode=1' run as root.

(Continued on next page)
Dell Inc.

PowerEdge R6615 (AMD EPYC 9374F 32-Core Processor)

CPU2017 License: 6573
Test Sponsor: Dell Inc.
Tested by: Dell Inc.

**Operating System Notes (Continued)**

To clear filesystem caches, 'sync; sysctl -w vm.drop_caches=3' run as root.
To disable address space layout randomization (ASLR) to reduce run-to-run variability, 'sysctl -w kernel.randomize_va_space=0' run as root.

To enable Transparent Hugepages (THP) for all allocations, 'echo always > /sys/kernel/mm/transparent_hugepage/enabled' and 'echo always > /sys/kernel/mm/transparent_hugepage/defrag' run as root.

**Environment Variables Notes**

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

```
LD_LIBRARY_PATH = 
    
/Mnt/ramdisk/cpu2017-1.1.8-aocc400-B1b/amd_rate_aocc400_genoa_B_lib/lib

MALLOC_CONF = "retain:true"
```

**General Notes**

Binaries were compiled on a system with 2x AMD EPYC 9174F CPU + 1.5TiB Memory using RHEL 8.6

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.

Benchmark run from a 125 GB ramdisk created with the cmd: "mount -t tmpfs -o size=125G tmpfs /mnt/ramdisk"

**Platform Notes**

BIOS settings:
- DRAM Refresh Delay: Performance
- DIMM Self Healing on
- Uncorrectable Memory Error: Disabled
- Virtualization Technology: Disabled
- L1 Stride Prefetcher: Disabled
- NUMA Nodes per Socket: 4
- L3 Cache as NUMA Domain: Enabled

(Continued on next page)
Platform Notes (Continued)

- System Profile: Custom
- Memory Patrol Scrub: Disabled
- PCI ASPM L1 Link
- Power Management: Disabled
- Determinism Slider: Power Determinism

Sysinfo program /mnt/ramdisk/cpu2017-1.1.8-aocc400-B1b/bin/sysinfo
Rev: r6622 of 2021-04-07 982a61ec915b55891ef0e16acaf64d
running on amd-sut Tue Dec 6 01:41:53 2022

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 9374F 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
- physical 0: cores 0 1 2 3 8 9 10 11 16 17 18 19 24 25 26 27 32 33 34 35 40 41 42 43 48 49 50 51 56 57 58 59

From lscpu from util-linux 2.37.2:

- Architecture: x86_64
- CPU op-mode(s): 32-bit, 64-bit
- Address sizes: 52 bits physical, 57 bits virtual
- Byte Order: Little Endian
- CPU(s): 64
- On-line CPU(s) list: 0-63
- Vendor ID: AuthenticAMD
- Model name: AMD EPYC 9374F 32-Core Processor
- CPU family: 25
- Model: 17
- Thread(s) per core: 2
- Core(s) per socket: 32
- Socket(s): 1
- Stepping: 1
- Frequency boost: enabled
- CPU max MHz: 4306.0000
- CPU min MHz: 400.0000
- BogoMIPS: 7701.84
- 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 cpuid extd_apicid

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

aperfmpref rapl pni pclmulqdq monitor ssse3 fma cx16 pcid sse4_1 sse4_2 x2apic movbe
popcnt aes xsave avx fl64 rdrand lahf_lm cmp_legacy svm extatic cr8 Legacy abm sse4a
misalignsse 3dnowprefetch osvw ibs skinit wdt tce topoext perfctr_core perfctr_nb
bpext perfctr_llc mwaitx cpb cat_l3 cdp_l3 invpcid_single hw_pstate ssbd mba ibrs
ibpb stibp vmmcall fsqsbase bm1 avx2 smep bmi2 erms invpcid cqm rdt_a avx512f
avx512dq rdseed adx smap avx512ifma clflushopt clwb avx512cd sha ni avx512bw
avx512vl xsaveopt xsavec xgetbv1 xsaves cqm_llc cqm_occup_llc cqm_mbb_total
cqm_mbb_local avx512_bf16 clzero irperf xsaveerptr rdpru wbnoinv amd_ppin cppc arat
npt lbv svm_lock nrip_safe tsc_scale vmcb_clean flushbyasid decodeassists
pausefilter pfthreshold avic v_vmsave_vmload vgif v_spec_ctrl avx512v bmi umip pk
ospke avx512_v bmi2 gfini vaes vpcmulqdq avx512_vnni avx512_bitalg avx512_vpopcntdq
la57 rdpid overflow_recov succor smca fsmc flush_l1d

Virtualization: AMD-V
L1d cache: 1 MiB (32 instances)
L1i cache: 1 MiB (32 instances)
L2 cache: 32 MiB (32 instances)
L3 cache: 256 MiB (8 instances)
NUMA node(s): 8
NUMA node0 CPU(s): 0-3, 32-35
NUMA node1 CPU(s): 16-19, 48-51
NUMA node2 CPU(s): 8-11, 40-43
NUMA node3 CPU(s): 24-27, 56-59
NUMA node4 CPU(s): 12-15, 44-47
NUMA node5 CPU(s): 28-31, 60-63
NUMA node6 CPU(s): 4-7, 36-39
NUMA node7 CPU(s): 20-23, 52-55

Vulnerability Itlb multihit: Not affected
Vulnerability L1tf: Not affected
Vulnerability Mds: Not affected
Vulnerability Meltdown: Not affected
Vulnerability Mmio stale data: Not affected
Vulnerability Retbleed: Not affected
Vulnerability Spec store bypass: Mitigation; Speculative Store Bypass disabled via
prctl and seccomp
Vulnerability Spectre v1: Mitigation; usercopy/swapgs barriers and __user
pointer sanitization
Vulnerability Spectre v2: Mitigation; Retpolines, IBFB conditional, IBRS_FW,
STIBP always-on, RSB filling
Vulnerability Srbds: Not affected
Vulnerability Tx sync abort: Not affected

From lscpu --cache:
NAME ONE-SIZE ALL-SIZE WAYS TYPE LEVEL SETS PHY-LINE COHERENCY-SIZE
L1d 32K 1M 8 Data 1 64 1 64
L1i 32K 1M 8 Instruction 1 64 1 64
L2 1M 32M 8 Unified 2 2048 1 64
L3 32M 256M 16 Unified 3 32768 1 64

(Continued on next page)
SPEC CPU®2017 Floating Point Rate Result

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Dell Inc.

PowerEdge R6615 (AMD EPYC 9374F 32-Core Processor)

CPU2017 License: 6573
Test Sponsor: Dell Inc.
Tested by: Dell Inc.

SPECrate®2017_fp_base = 477

SPECrate®2017_fp_peak = Not Run

Test Date: Dec-2022
Hardware Availability: Dec-2022
Software Availability: Nov-2022

Platform Notes (Continued)

/proc/cpuinfo cache data
  cache size : 1024 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: 96311 MB
  node 0 free: 92258 MB
  node 1 cpus: 16 17 18 19 48 49 50 51
  node 1 size: 96729 MB
  node 1 free: 96215 MB
  node 2 cpus: 8 9 10 11 40 41 42 43
  node 2 size: 96765 MB
  node 2 free: 96269 MB
  node 3 cpus: 24 25 26 27 56 57 58 59
  node 3 size: 96764 MB
  node 3 free: 96267 MB
  node 4 cpus: 12 13 14 15 44 45 46 47
  node 4 size: 96765 MB
  node 4 free: 96208 MB
  node 5 cpus: 28 29 30 31 60 61 62 63
  node 5 size: 96764 MB
  node 5 free: 96258 MB
  node 6 cpus: 4 5 6 7 36 37 38 39
  node 6 size: 96764 MB
  node 6 free: 96250 MB
  node 7 cpus: 20 21 22 23 52 53 54 55
  node 7 size: 96726 MB
  node 7 free: 96198 MB
node distances:

  node   0   1   2   3   4   5   6   7
  0:  10  11  12  12  12  12  12  12
  1: 11  11  12  12  12  12  12  12
  2: 12  12  12  12  12  12  12  12
  3: 12  12  12  12  12  12  12  12
  4: 12  12  12  12  12  12  12  12
  5: 12  12  12  12  12  12  12  12
  6: 12  12  12  12  12  12  12  12
  7: 12  12  12  12  12  12  12  12

From /proc/meminfo

  MemTotal:       792161852 kB
  HugePages_Total:       0
  Hugepagesize:       2048 kB

(Continued on next page)
Dell Inc.  
PowerEdge R6615 (AMD EPYC 9374F 32-Core Processor) 

**SPECratel017_fp_base** = 477 
**SPECratel017_fp_peak** = Not Run

**CPU2017 License**: 6573  
**Test Sponsor**: Dell Inc.  
**Tested by**: Dell Inc.  
**Test Date**: Dec-2022  
**Hardware Availability**: Dec-2022  
**Software Availability**: Nov-2022

---

**Platform Notes (Continued)**

```
/sbin/tuned-adm active
   Current active profile: latency-performance

/sys/devices/system/cpu/cpu*/cpufreq/scaling_governor has performance

/usr/bin/lsb_release -d
   Ubuntu 22.04.1 LTS

From /etc/*release* /etc/*version*
debian_version: bookworm/sid
os-release:
   PRETTY_NAME="Ubuntu 22.04.1 LTS"
   NAME="Ubuntu"
   VERSION_ID="22.04"
   VERSION="22.04.1 LTS (Jammy Jellyfish)"
   VERSION_CODENAME=jammy
   ID=ubuntu
   ID_LIKE=debian
   HOME_URL="https://www.ubuntu.com/

uname -a:
   Linux amd-sut 5.15.0-46-generic #49-Ubuntu SMP Thu Aug 4 18:03:25 UTC 2022 x86_64
   x86_64 x86_64 GNU/Linux

Kernel self-reported vulnerability status:

CVE-2018-12207 (iTLB Multihit): Not affected
CVE-2018-3620 (L1 Terminal Fault): Not affected
Microarchitectural Data Sampling: Not affected
CVE-2017-5754 (Meltdown): Not affected
mmio_stale_data: Not affected
retbleed: 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: Retpolines, IBPB: conditional, IBRS_FW, STIBP: always-on, RSB filling
CVE-2020-0543 (Special Register Buffer Data Sampling): Not affected
CVE-2019-11135 (TSX Asynchronous Abort): Not affected

run-level 3 Dec 5 23:53
```

(Continued on next page)
SPEC CPU®2017 Floating Point Rate Result

Dell Inc.

PowerEdge R6615 (AMD EPYC 9374F 32-Core Processor)

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</table>

**SPECrate®2017_fp_base = 477**

**SPECrate®2017_fp_peak = Not Run**

---

### Platform Notes (Continued)

SPEC is set to: /mnt/ramdisk/cpu2017-1.1.8-aocc400-B1b

Filesystem Type Size Used Avail Use% Mounted on
tmpfs tmpfs 125G 3.4G 122G 3% /mnt/ramdisk

From /sys/devices/virtual/dmi/id
Vendor: Dell Inc.
Product: PowerEdge R6615
Product Family: PowerEdge
Serial: GLM4018

Additional information from dmidecode 3.3 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:
12x 802C0000802C MTC40F2046S1RC48BA1 64 GB 2 rank 4800

BIOS:
  BIOS Vendor: Dell Inc.
  BIOS Version: 1.1.0
  BIOS Date: 11/25/2022
  BIOS Revision: 1.1

(End of data from sysinfo program)

---

### Compiler Version Notes

```
C               | 519.lbm_r(base) 538.imagick_r(base) 544.nab_r(base)
------------------------------------------------------------------------------
AMD clang version 14.0.6 (CLANG: AOCC_4.0.0-Build#389 2022_10_07) (based on LLVM Mirror.Version.14.0.6)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-4.0-3206-389/bin
------------------------------------------------------------------------------
```

```
C++             | 508.namd_r(base) 510.parest_r(base)
------------------------------------------------------------------------------
AMD clang version 14.0.6 (CLANG: AOCC_4.0.0-Build#389 2022_10_07) (based on LLVM Mirror.Version.14.0.6)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-4.0-3206-389/bin
------------------------------------------------------------------------------
```

(Continued on next page)
**Compiler Version Notes (Continued)**

```
C++, C             | 511.povray_r(base) 526.blender_r(base)
------------------------------------------------------------------
AMD clang version 14.0.6 (CLANG: AOCC_4.0.0-Build#389 2022_10_07) (based on LLVM Mirror.Version.14.0.6)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-4.0-3206-389/bin
------------------------------------------------------------------
C++, C, Fortran    | 507.cactuBSSN_r(base)
------------------------------------------------------------------
AMD clang version 14.0.6 (CLANG: AOCC_4.0.0-Build#389 2022_10_07) (based on LLVM Mirror.Version.14.0.6)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-4.0-3206-389/bin
------------------------------------------------------------------
Fortran            | 503.bwaves_r(base) 549.fotonik3d_r(base) 554.roms_r(base)
------------------------------------------------------------------
AMD clang version 14.0.6 (CLANG: AOCC_4.0.0-Build#389 2022_10_07) (based on LLVM Mirror.Version.14.0.6)
Target: x86_64-unknown-linux-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc/aocc-compiler-rel-4.0-3206-389/bin
```
Dell Inc.  
PowerEdge R6615 (AMD EPYC 9374F 32-Core Processor)  

CPU2017 License: 6573  
Test Sponsor: Dell Inc.  
Tested by: Dell Inc.  

SPECrater®2017_fp_base = 477  
SPECrater®2017_fp_peak = Not Run  

Test Date: Dec-2022  
Hardware Availability: Dec-2022  
Software Availability: Nov-2022  

Compiler Version Notes (Continued)

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<th>Fortran, C</th>
<th>521.wrf_r(base) 527.cam4_r(base)</th>
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<tr>
<td>Benchmarks using both C and C++:clang++ clang</td>
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<tr>
<td>Benchmarks using Fortran, C, and C++:clang++ clang flang</td>
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Base Compiler Invocation

C benchmarks:
clang

C++ benchmarks:
clang++

Fortran benchmarks:
flang

Benchmarks using both Fortran and C:
flang clang

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

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

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 -Mbyteswapio -DSPEC_LP64

(Continued on next page)
SPEC CPU®2017 Floating Point Rate Result

Dell Inc.
PowerEdge R6615 (AMD EPYC 9374F 32-Core Processor)

SPECratre®2017_fp_base = 477
SPECratre®2017_fp_peak = Not Run

CPU2017 License: 6573
Test Date: Dec-2022

Test Sponsor: Dell Inc.
Hardware Availability: Dec-2022
Tested by: Dell Inc.
Software Availability: Nov-2022

Base Portability Flags (Continued)

526.blender_r: -funsigned-char -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

Base Optimization Flags

C benchmarks:
-m64 -flto -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-ldist-scalar-expand -fenable-aggressive-gather -O3
-march=znver4 -fveclib=AMDLIBM -ffast-math -fstruct-layout=7
-mllvm -unroll-threshold=50 -mllvm -inline-threshold=1000
-fremap-arrays -fstrip-mining -mllvm -reduce-array-computations=3
-zopt -lamdlibm -lamdalloc -lflang

C++ benchmarks:
-m64 -flto -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-x86-use-vzeroupper=false -O3 -march=znver4
-fveclib=AMDLIBM -ffast-math -mllvm -unroll-threshold=100
-finline-aggressive -mllvm -loop-unswitch-threshold=200000
-mllvm -reduce-array-computations=3 -zopt -lamdlibm -lamdalloc

Fortran benchmarks:
-m64 -flto -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-enable-X86-prefetching -O3 -march=znver4
-fveclib=AMDLIBM -ffast-math -Kieee -Mrecursive -funroll-loops
-mllvm -lsr-in-nested-loop -mllvm -reduce-array-computations=3
-fepilog-vectorization-of-inductions -zopt -lamdlibm -lamdalloc

Benchmarks using both Fortran and C:
-m64 -flto -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-enable-X86-prefetching -O3 -march=znver4
-fveclib=AMDLIBM -ffast-math -fstruct-layout=7
-mllvm -unroll-threshold=50 -mllvm -inline-threshold=1000
-fremap-arrays -fstrip-mining -mllvm -reduce-array-computations=3
-zopt -Kieee -Mrecursive -funroll-loops -mllvm -lsr-in-nested-loop

(Continued on next page)
Dell Inc. PowerEdge R6615 (AMD EPYC 9374F 32-Core Processor)

SPECrater®2017_fp_base = 477
SPECrater®2017_fp_peak = Not Run

CPU2017 License: 6573
Test Sponsor: Dell Inc.
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Tested by: Dell Inc.
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Base Optimization Flags (Continued)

Benchmarks using both Fortran and C (continued):
-fepilog-vectorization-of-inductions -lamdlibm -lamdalloc -lflang

Benchmarks using both C and C++:
-m64 -flto -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-x86-use-vzeroupper=false -O3 -march=znver4
-fveclib=AMDLIBM -ffast-math -fstruct-layout=7
-mllvm -unroll-threshold=50 -mllvm -inline-threshold=1000
-freemap-arrays -fstrip-mining -mllvm -reduce-array-computations=3
-zopt -mllvm -unroll-threshold=100 -finline-aggressive
-mllvm -loop-unswitch-threshold=200000 -lamdlibm -lamdalloc -lflang

Benchmarks using Fortran, C, and C++:
-m64 -flto -Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3
-Wl,-mllvm -Wl,-x86-use-vzeroupper=false -O3 -march=znver4
-fveclib=AMDLIBM -ffast-math -fstruct-layout=7
-mllvm -unroll-threshold=50 -mllvm -inline-threshold=1000
-freemap-arrays -fstrip-mining -mllvm -reduce-array-computations=3
-zopt -mllvm -unroll-threshold=100 -finline-aggressive
-mllvm -loop-unswitch-threshold=200000 -Kieee -Mrecursive
-funroll-loops -mllvm -lret-in-nested-loop
-fepilog-vectorization-of-inductions -lamdlibm -lamdalloc -lflang

Base Other Flags

C benchmarks:
-Wno-unused-command-line-argument

C++ benchmarks:
-Wno-unused-command-line-argument

Fortran benchmarks:
-Wno-unused-command-line-argument

Benchmarks using both Fortran and C:
-Wno-unused-command-line-argument

Benchmarks using both C and C++:
-Wno-unused-command-line-argument

Benchmarks using Fortran, C, and C++:
-Wno-unused-command-line-argument
Dell Inc.  
PowerEdge R6615 (AMD EPYC 9374F 32-Core Processor)

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The flags files that were used to format this result can be browsed at:
http://www.spec.org/cpu2017/flags/aocc400-flags.html

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/aocc400-flags.xml
http://www.spec.org/cpu2017/flags/Dell-Platform-Flags-PowerEdge-AMD-EPYC-v1.0.xml

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

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