# SPEC CPU®2017 Floating Point Speed Result

**Lenovo Global Technology**

ThinkSystem SR645  
2.80 GHz, AMD EPYC 7543

**SPECspeed®2017_fp_base = 227**  
**SPECspeed®2017_fp_peak = 233**

| Threads | 0 | 40 | 80 | 120 | 160 | 200 | 240 | 280 | 320 | 360 | 400 | 440 | 480 | 520 | 560 | 600 | 640 | 680 | 720 | 760 | 800 | 840 | 880 | 920 |
|---------|---|----|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 603.bwaves_s | 64 | 371 |
| 607.cactuBSSN_s | 64 | 371 |
| 619.lbm_s | 64 | 122 |
| 621.wrf_s | 64 | 185 |
| 627.cam4_s | 64 | 187 |
| 628.pop2_s | 64 | 181 |
| 638.imagick_s | 64 | 71.6 |
| 644.nab_s | 64 | 310 |
| 649.fotonik3d_s | 64 | 121 |
| 654.roms_s | 64 | 262 |

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## Hardware

**CPU Name:** AMD EPYC 7543  
**Max MHz:** 3700  
**Nominal:** 2800  
**Enabled:** 64 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 core, 32 MB shared / 4 cores  
**Other:** None  
**Memory:** 512 GB (16 x 32 GB 2Rx4 PC4-3200AA-R)  
**Storage:** 1 x 960 GB SATA SSD  
**Other:** None

## Software

**OS:** SUSE Linux Enterprise Server 15 SP2 (x86_64)  
**Kernel:** 5.3.18-22-default  
**Compiler:** C/C++/Fortran: Version 3.0.0 of AOCC  
**Parallel:** Yes  
**Firmware:** Lenovo BIOS Version D8E115G 2.02 released Mar-2021  
**File System:** xfs  
**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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CPU2017 License: 9017
Test Sponsor: Lenovo Global Technology
Tested by: Lenovo Global Technology

Test Date: Apr-2021
Hardware Availability: Mar-2021
Software Availability: Mar-2021

<table>
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<tr>
<th>Benchmark</th>
<th>Threads</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
<th>Ratio</th>
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<td>603.bwaves_s</td>
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<td>638.imagick_s</td>
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<td>649.fotonik3d_s</td>
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<td>654.roms_s</td>
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<td>60.1</td>
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<td>60.1</td>
<td>262</td>
</tr>
</tbody>
</table>

Results Table

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 numacl1 i.e.:
numactl --interleave=all runcpu <etc>
'echo 8 > /proc/sys/vm/dirty_ratio' run as root to limit dirty cache to 8% of memory.
'echo 1 > /proc/sys/vm/swappiness' run as root to limit swap usage to minimum necessary.
'echo 1 > /proc/sys/vm/zone_reclaim_mode' run as root to free node-local memory and avoid remote memory usage.
'sync; echo 3 > /proc/sys/vm/drop_caches' run as root to reset filesystem caches.
'sysctl -w kernel.randomize_va_space=0' run as root to disable address space layout randomization (ASLR) to reduce run-to-run variability.
To enable Transparent Hugepages (THP) for all allocations,
'echo always > /sys/kernel/mm/transparent_hugepage/enabled' and
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Operating System Notes (Continued)
'echo always > /sys/kernel/mm/transparent_hugepage/defrag' run as root.
To enable THP only on request for peak runs of 628.pop2_s, and 638.imagick_s,
'echo madvise > /sys/kernel/mm/transparent_hugepage/enabled' run as root.
To disable THP for peak runs of 627.cam4_s, 644.nab_s, 649.fotonik3d_s, and 654.roms_s,
'echo never > /sys/kernel/mm/transparent_hugepage/enabled' run as root.

Environment Variables Notes

Environment variables set by runcpu before the start of the run:
GOMP_CPU_AFFINITY = "0-63"
LD_LIBRARY_PATH = 
    "/home/cpu2017-1.1.5-amd-aocc300-milan-B1/amd_speed_aocc300_milan_B_lib/
764;/home/cpu2017-1.1.5-amd-aocc300-milan-B1/amd_speed_aocc300_milan_B_lib/
632:" MALLOC_CONF = "retain:true"
OMP_DYNAMIC = "false"
OMP_SCHEDULE = "static"
OMP_STACKSIZE = "128M"
OMP_THREAD_LIMIT = "64"

Environment variables set by runcpu during the 619.lbm_s peak run:
GOMP_CPU_AFFINITY = "0-63"

Environment variables set by runcpu during the 621.wrf_s peak run:
GOMP_CPU_AFFINITY = "0-63"

Environment variables set by runcpu during the 654.roms_s peak run:
GOMP_CPU_AFFINITY = "0-63"

General Notes

Binaries were compiled on a system with 2x AMD EPYC 7742 CPU + 1TiB Memory using openSUSE 15.2

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.

jemalloc: configured and built with GCC v4.8.2 in RHEL 7.4 (No options specified)
jemalloc 5.1.0 is available here: https://github.com/jemalloc/jemalloc/releases/download/5.1.0/jemalloc-5.1.0.tar.bz2
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Platform Notes

BIOS configuration:
Operating Mode set to Maximum Performance and then set it to Custom Mode
4-Link xGMI Max Speed set to 16Gbps
SOC P-States set to P0
SMT Mode set to Disable
DLWM Support set to Disabled

Sysinfo program /home/cpu2017-1.1.5-amd-aocc300-milan-B1/bin/sysinfo
Rev: r6538 of 2020-09-24 e8664e66d2d7080afeaa89d4b38e2f1c
running on localhost Wed Apr 28 11:47:31 2021

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 7543 32-Core Processor
  2 "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: 32
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
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

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): 64
On-line CPU(s) list: 0-63
Thread(s) per core: 1
Core(s) per socket: 32
Socket(s): 2
NUMA node(s): 2
Vendor ID: AuthenticAMD
CPU family: 25
Model: 1
Model name: AMD EPYC 7543 32-Core Processor
Stepping: 1
CPU MHz: 1791.477
CPU max MHz: 2800.0000
CPU min MHz: 1500.0000

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Platform Notes (Continued)

BogoMIPS: 5589.32
Virtualization: AMD-V
L1d cache: 32K
L1i cache: 32K
L2 cache: 512K
L3 cache: 32768K
NUMA node0 CPU(s): 0-31
NUMA node1 CPU(s): 32-63

Flags: fpu vme de pse tsc msr pae mce 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 aperfmperf pni pclmulqdq monitor ssse3 fma cx16 pcid sse4_1 sse4_2 movbe popcnt aes avx f16c rdrand lahf_lm cmp_legacy svm extapic cr8_legacy abm sse4a misalignsse 3dnop prefetch osvw ibr skinit wdt tce topoext perfctr_core perfctr_nb bext perfctr_l1l mwaitx cpb cat_l3 cdp l3 invpcid_single hw_pstate ssbd mba ibrs ibpb stibp vmmcall fs qbase bmi1 avx2 smep bmi2 erms invpcid cmp_q mrdt_a rdseed adx sm ap clflushopt clwb sha ni xsaveopt xsave v xsavec xsaves cqm_llc cqm_occup_llc cqm_mbb_total cqm_mbb_local clzero irperf xsaveerptr wsnonvmd arat npt ibrv svm_lock nrp_save tsc_scale vmcb_clean flushbyasid decodeassists pausefilter pthreshold u_vmsave_vmload vgfl umip pkv ospe vaes vpcm lqdq rdpdi overflow_recov succor smca

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
node 0 size: 257804 MB
node 0 free: 257272 MB
node 1 cpus: 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 1 size: 258035 MB
node 1 free: 257469 MB
node distances:
node 0 1
0: 10 32
1: 32 10

From /proc/meminfo
MemTotal: 528219672 kB
HugePages_Total: 0
Hugepagesize: 2048 kB

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

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Platform Notes (Continued)

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

os-release:
    NAME="SLES"
    VERSION="15-SP2"
    VERSION_ID="15.2"
    PRETTY_NAME="SUSE Linux Enterprise Server 15 SP2"
    ID="sles"
    ID_LIKE="suse"
    ANSI_COLOR="0;32"
    CPE_NAME="cpe:/o:suse:sles:15:sp2"

uname -a:
    Linux localhost 5.3.18-22-default #1 SMP Wed Jun 3 12:16:43 UTC 2020 (720aeba) 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): Mitigation: Speculative Store Bypass disabled via prctl and seccomp
CVE-2018-3639 (Speculative Store Bypass): Mitigation: speculative_store
CVE-2017-5753 (Spectre variant 1): Mitigation: usercopy/swapgs barriers and _user pointer sanitation
CVE-2017-5715 (Spectre variant 2): Mitigation: Full AMD retpoline, IBPB: conditional, IBRS_FW, STIBP: disabled, RSB filling
CVE-2020-0543 (Special Register Buffer Data Sampling): Not affected
CVE-2019-11135 (TSX Asynchronous Abort): Not affected

run-level 3 Apr 28 11:46

SPEC is set to: /home/cpu2017-1.1.5-amd-aocc300-milan-B1

Additional information from dmidecode follows. WARNING: Use caution when you interpret

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Platform Notes (Continued)

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 Samsung M393A4K40DB3-CWE 32 GB 2 rank 3200
16x Unknown Unknown

BIOS:
BIOS Vendor: Lenovo
BIOS Version: D8E115G-2.02
BIOS Date: 03/25/2021
BIOS Revision: 2.2
Firmware Revision: 3.1

(End of data from sysinfo program)

Compiler Version Notes

---

C

| 619.lbm\_s(base, peak) 638.imagick\_s(base, peak) 644.nab\_s(base, peak) |
---

AMD clang version 12.0.0 (CLANG: AOCC\_3.0.0\-Build\#78 2020\_12\_10) (based on LLVM Mirror.Version.12.0.0)
Target: x86\_64\-unknown\-linux\-gnu
Thread model: posix
InstalledDir: /opt/AMD/aocc-compiler-3.0.0/bin

---

C++, C, Fortran

| 607.cactuBSSN\_s(base, peak) |
---

AMD clang version 12.0.0 (CLANG: AOCC\_3.0.0\-Build\#78 2020\_12\_10) (based on LLVM Mirror.Version.12.0.0)
Target: x86\_64\-unknown\-linux\-gnu
Thread model: posix
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Thread model: posix
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Target: x86\_64\-unknown\-linux\-gnu
Thread model: posix

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**Compiler Version Notes (Continued)**

**InstalledDir:** /opt/AMD/aocc-compiler-3.0.0/bin

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**Fortran**

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**AMD clang version 12.0.0 (CLANG: AOCC_3.0.0-Build#78 2020_12_10) (based on LLVM Mirror.Version.12.0.0)**

**Target:** x86_64-unknown-linux-gnu

**Thread model:** posix

**InstalledDir:** /opt/AMD/aocc-compiler-3.0.0/bin

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**Fortran, C**

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**AMD clang version 12.0.0 (CLANG: AOCC_3.0.0-Build#78 2020_12_10) (based on LLVM Mirror.Version.12.0.0)**

**Target:** x86_64-unknown-linux-gnu

**Thread model:** posix

**InstalledDir:** /opt/AMD/aocc-compiler-3.0.0/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
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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:
-m64 -mno-adx -mno-sse4a -Wl,-mllvm -Wl,-region-vectorize
-Wl,-mllvm -Wl,-function-specialize
-Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -march=znver3
-ffast-math =AMDLIBM
-fstruct-layout=5
-mllvm -unroll-threshold=50 -mllvm -inline-threshold=1000
-fremap-arrays -mllvm -function-specialize -flv-function-specialization
-mllvm -enable-gvn-hoist -mllvm -global-vectorize-slp=true
-mllvm -enable-licm-vrp -mllvm -reduce-array-computations=3 -z muldefs
-DSPEC_OPENMP -fopenmp -fopenmp=libomp -lomp -lamdlibm -ljemalloc
-lflang -lflangrti

Fortran benchmarks:
-m64 -mno-adx -mno-sse4a -Wl,-mllvm -Wl,-enable-X86-prefetching
-Wl,-mllvm -Wl,-enable-licm-vrp -Wl,-mllvm -Wl,-region-vectorize
-Wl,-mllvm -Wl,-function-specialize
-Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-Wl,-mllvm -Wl,-reduce-array-computations=3 -Hz,1,0x1 -O3
-march=znver3 -fveclib=AMDLIBM
-Mrecursive
-mllvm -fuse-tile-inner-loop -funroll-loops
-mllvm -extra-vectorizer-passes -mllvm -lsr-in-nested-loop
-mllvm -enable-licm-vrp -mllvm -reduce-array-computations=3
-mllvm -global-vectorize-slp=true -z muldefs -DSPEC_OPENMP -fopenmp
-fopenmp -lomp -ljemalloc -ljemalloc -lflang -lflangrti

Benchmarks using both Fortran and C:
-m64 -mno-adx -mno-sse4a -Wl,-mllvm -Wl,-enable-X86-prefetching
-Wl,-mllvm -Wl,-enable-licm-vrp -Wl,-mllvm -Wl,-region-vectorize
-Wl,-mllvm -Wl,-function-specialize
-Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6

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

Benchmarks using both Fortran and C (continued):
-3-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -march=znver3
-3-fveclib=AMDLIBM -ffast-math -flto -fstruct-layout=5
-3-mllvm -unroll-threshold=50 -mllvm -inline-threshold=1000
-3-fremap-arrays -mllvm -function-specialize -flv-function-specialization
-3-mllvm -enable-gvn-hoist -mllvm -global-vectorize-slp=true
-3-mllvm -enable-licm-vrp -mllvm -reduce-array-computations=3 -Hz,1,0x1
-3-Mrecursive -mllvm -fuse-tile-inner-loop -funroll-loops
-3-mllvm -extra-vectorizer-passes -mllvm -lsr-in-nested-loop -z muldefs
-3-DSPEC_OPENMP -fopenmp -fopenmp=libomp -lomp -lamdlibm -ljemalloc
-3-1flang -1flangrti

Benchmarks using Fortran, C, and C++:
-3-m64 -mno-adx -mno-sse4a -std=c++98
-3-Wl,-mllvm -Wl,-x86-use-vzeroupper=false
-3-Wl,-mllvm -Wl,-region-vectorize -Wl,-mllvm -Wl,-function-specialize
-3-Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6
-3-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -march=znver3
-3-fveclib=AMDLIBM -ffast-math -flto -fstruct-layout=5
-3-mllvm -unroll-threshold=50 -mllvm -inline-threshold=1000
-3-fremap-arrays -mllvm -function-specialize -flv-function-specialization
-3-mllvm -enable-gvn-hoist -mllvm -global-vectorize-slp=true
-3-mllvm -enable-licm-vrp -mllvm -reduce-array-computations=3
-3-mllvm -enable-partial-unswitch -mllvm -unroll-threshold=100
-3-finline-aggressive -mllvm -loop-unswitch-threshold=200000
-3-mllvm -reroll-loops -mllvm -aggressive-loop-unswitch
-3-mllvm -extra-vectorizer-passes -mllvm -convert-pow-exp-to-int=false
-3-Hz,1,0x1 -Mrecursive -mllvm -fuse-tile-inner-loop -funroll-loops
-3-mllvm -lsr-in-nested-loop -z muldefs -DSPEC_OPENMP -fopenmp
-3-fopenmp=libomp -lomp -lamdlibm -ljemalloc -lflang -1flangrti

Base Other Flags

C benchmarks:
-3-which-unused-command-line-argument -Wno-return-type

Fortran benchmarks:
-3-which-unused-command-line-argument -Wno-return-type

Benchmarks using both Fortran and C:
-3-which-unused-command-line-argument -Wno-return-type

Benchmarks using Fortran, C, and C++:
-3-which-unused-command-line-argument -Wno-return-type
Lenovo Global Technology  
ThinkSystem SR645  
2.80 GHz, AMD EPYC 7543  

SPECspeed®2017_fp_base = 227  
SPECspeed®2017_fp_peak = 233

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<td>Tested by:</td>
<td>Lenovo Global Technology</td>
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<tr>
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<tr>
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</tbody>
</table>

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: -m64 -mno-adx -mno-sse4a  
-W1, -mlvm -W1,-function-specialize  
-W1, -mlvm -W1,-align-all-nofallthru-blocks=6  
-W1, -mlvm -W1,-reduce-array-computations=3 -Ofast  
-march=znver3 -fveclib=AMDLIBM -ffast-math -flito  
-fstruct-layout=5 -mlvm -unroll-threshold=50  
-fremap-arrays -flv-function-specialization  
-mlvm -inline-threshold=1000 -mlvm -enable-gvn-hoist  
-mlvm -global-vectorize-slp=true  
-mlvm -function-specialize -mlvm -enable-lcm-VRP  
-mlvm -reduce-array-computations=3 -DSPEC_OPENMP -fopenmp  
-fopenmp=libomp -lomp -ljemalloc -lflang

638.imagick_s: basepeak = yes

644.nab_s: basepeak = yes

Fortran benchmarks:

603.bwaves_s: basepeak = yes

(Continued on next page)
Lenovo Global Technology
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Test Date: Apr-2021
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Software Availability: Mar-2021

Peak Optimization Flags (Continued)

649.fotonik3d_s: basepeak = yes

654.roms_s: -m64 -mno-adx -mno-sse4a
-W1,-mlllvm -W1,-enable-X86-prefetching
-W1,-mlllvm -W1,-enable-licm-vrp
-W1,-mlllvm -W1,-function-specialize
-W1,-mlllvm -W1,-align-all-nofallthru-blocks=6
-W1,-mlllvm -W1,-reduce-array-computations=3 -Ofast
-march=znver3 -fveclib=AMDLIBM -ffast-math -Mrecursive
-mlllvm -reduce-array-computations=3
-mlllvm -global-vectorize-slp=true -mlllvm -enable-licm-vrp
-DSPEC_OPENMP -fopenmp -fopenmp=libomp -lomp -lamdlibm
-ljemalloc -lflang

Benchmarks using both Fortran and C:

621.wrf_s: -m64 -mno-adx -mno-sse4a
-W1,-mlllvm -W1,-enable-X86-prefetching
-W1,-mlllvm -W1,-enable-licm-vrp
-W1,-mlllvm -W1,-function-specialize
-W1,-mlllvm -W1,-align-all-nofallthru-blocks=6
-W1,-mlllvm -W1,-reduce-array-computations=3 -Ofast
-march=znver3 -fveclib=AMDLIBM -ffast-math -flto
-fstruct-layout=5 -mlllvm -unroll-threshold=50
-fremap-arrays -flv-function-specialization
-mlllvm -inline-threshold=1000 -mlllvm -enable-gvn-hoist
-mlllvm -global-vectorize-slp=true
-mlllvm -function-specialize -mlllvm -enable-licm-vrp
-mlllvm -reduce-array-computations=3 -Hz,1,0x1 -O3
-Mrecursive -mlllvm -fuse-tile-inner-loop -funroll-loops
-mlllvm -extra-vectorizer-passes -mlllvm -lsr-in-nested-loop
-DSPEC_OPENMP -fopenmp -fopenmp=libomp -lomp -lamdlibm
-ljemalloc -lflang

627.cam4_s: basepeak = yes
628.pop2_s: basepeak = yes

Benchmarks using Fortran, C, and C++:

607.cactuBSSN_s: basepeak = yes
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SPECspeed®2017_fp_base = 227
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C benchmarks:
-Wno-unused-command-line-argument -Wno-return-type

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

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

Benchmarks using Fortran, C, and C++:
-Wno-unused-command-line-argument -Wno-return-type

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

You can also download the XML flags sources by saving the following links:
http://www.spec.org/cpu2017/flags/Lenovo-Platform-SPECcpu2017-Flags-V1.2-Milan-E.xml

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