## Lenovo Global Technology

**ThinkSystem SR635**  
**3.00 GHz, AMD EPYC 7313P**

**CPU2017 License:** 9017  
**Test Sponsor:** Lenovo Global Technology  
**Tested by:** Lenovo Global Technology  
**Test Date:** Jun-2021  
**Hardware Availability:** Jun-2021  
**Software Availability:** Mar-2021

### SPECspeed

<table>
<thead>
<tr>
<th>Name</th>
<th>Threads</th>
<th>SPECspeed®2017_fp_base</th>
<th>SPECspeed®2017_fp_peak</th>
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<tr>
<td>603.bwaves_s</td>
<td>16</td>
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<tr>
<td>607.cactuBSSN_s</td>
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<td>638.imagick_s</td>
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<tr>
<td>654.roms_s</td>
<td>16</td>
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</tr>
</tbody>
</table>

### Hardware

| CPU Name        | AMD EPYC 7313P  
| Max MHz         | 3700  
| Nominal         | 3000  
| Enabled         | 16 cores, 1 chip, 2 threads/core  
| Orderable       | 1 chip  
| Cache L1        | 32 KB I + 32 KB D on chip per core  
| L2              | 512 KB I+D on chip per core  
| L3              | 128 MB I+D on chip per chip, 32 MB shared / 4 cores  
| Other           | None  
| Memory          | 256 GB (8 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)  
| Compiler       | C/C++/Fortran: Version 3.0.0 of AOCC  
| Parallel       | Yes  
| Firmware       | Lenovo BIOS Version CFE125U 6.0 released May-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 and OS set to prefer performance at the cost of additional power usage

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**Results Table**

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Threads</th>
<th>Seconds</th>
<th>Ratio</th>
<th>Seconds</th>
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<td>628.pop2_s</td>
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<td>83.7</td>
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<td>83.9</td>
<td>141</td>
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<tr>
<td>638.imagick_s</td>
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<td>99.6</td>
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<td>99.6</td>
<td>145</td>
<td>99.6</td>
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<tr>
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<td>143</td>
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<td>654.roms_s</td>
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<td>132</td>
<td>119</td>
<td>132</td>
<td>119</td>
<td>132</td>
<td>119</td>
</tr>
</tbody>
</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 numacl e.g.:

```
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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SPECspeed®2017_fp_base = 110
SPECspeed®2017_fp_peak = 115

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 = "0-31"
LD_LIBRARY_PATH =
  "/home/cpu2017-1.1.8-amd-aocc300-milan-B1/amd_speed_aocc300_milan_B_lib/
64;/home/cpu2017-1.1.8-amd-aocc300-milan-B1/amd_speed_aocc300_milan_B_lib/
64/32;"
MALLOCONF = "retain:true"
OMP_DYNAMIC = "false"
OMP_SCHEDULE = "static"
OMP_STACKSIZE = "128M"
OMP_THREADLIMIT = "32"

Environment variables set by runcpu during the 619.lbm_s peak run:
GOMP_CPU_AFFINITY = "0-15"

Environment variables set by runcpu during the 644.nab_s peak run:
GOMP_CPU_AFFINITY = "0 16 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 654.roms_s peak run:
GOMP_CPU_AFFINITY = "0-15"

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:**
Choose Operating Mode set to Maximum Performance

Sysinfo program /home/cpu2017-1.1.8-amd-aocc300-milan-B1/bin/sysinfo
Rev: r6622 of 2021-04-07 982a61ec0915b55891ef0e16aca6d64d
running on localhost Sat Jun 26 02:18:21 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 7313P 16-Core Processor
- "physical id"s (chips)
  - 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 : 32
- physical 0: cores 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15

From lscpu from util-linux 2.33.1:
- 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): 32
- On-line CPU(s) list: 0-31
- Thread(s) per core: 2
- Core(s) per socket: 16
- Socket(s): 1
- NUMA node(s): 1
- Vendor ID: AuthenticAMD
- CPU family: 25
- Model: 1
- Model name: AMD EPYC 7313P 16-Core Processor
- Stepping: 1
- CPU MHz: 2795.815
- CPU max MHz: 3000.0000
- CPU min MHz: 1500.0000
- BogoMIPS: 5988.22
- Virtualization: AMD-V
- L1d cache: 32K
- L1i cache: 32K
- L2 cache: 512K
- L3 cache: 32768K
- NUMA node0 CPU(s): 0-31

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SPECspeed®2017_fp_base = 110
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Platform Notes (Continued)

Flags: fpu vme de pse tsc mtrr pge mca cmov
       pat pse36 clflush mmx fxsr 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 avx f16c rdrnd
       lahf_lm cmp_legacy svm extapic cr8_legacy abm sse4a misalignsse 3dnowprefetch osvw
       ibs skinit wdt tce topoext perfctr_core perfctr_nb bpext perfctr_llc mwaitx cpb
       cat_l3 odp_l3 invpcid_single hw_pstate ssbd mba ibrs ibpb stibp vmmcall fsgsbase
       bm1 avx2 smep bmi2 erms invpcid cqm rdt_a rdseed avx fma cx16 pcid sse4_1 sse4_2
       movbe popcnt avx f16c rdrnd

/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: 1 nodes (0)
    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: 257606 MB
    node 0 free: 257026 MB
    node distances:
    node 0:
      0: 10

From /proc/meminfo
    MemTotal:       263789068 kB
    HugePages_Total:       0
    Hugepagesize:       2048 kB

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

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:

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Platform Notes (Continued)

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: usercopy/swapsgs barriers and __user pointer sanitization
CVE-2017-5753 (Spectre variant 1): Mitigation: Full AMD retpoline, IBFB: conditional, IBRS_FW, STIBP: always-on, RSB filling
CVE-2017-5715 (Spectre variant 2): Not affected
CVE-2020-0543 (Special Register Buffer Data Sampling): Not affected
CVE-2019-11135 (TSX Asynchronous Abort): Not affected

run-level 3 Jun 26 02:15

SPEC is set to: /home/cpu2017-1.1.8-amd-aocc300-milan-B1

From /sys/devices/virtual/dmi/id

Vendor: Lenovo
Product: ThinkSystem SR635 -[7Y98XXXXXX]-
Product Family: ThinkSystem
Serial: 0123456789

Additional information from dmidecode 3.2 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:
8x Samsung M393A4K40DB3-CWE 32 GB 2 rank 3200
8x Unknown Unknown

BIOS:
BIOS Vendor: Lenovo
BIOS Version: CFE125U
BIOS Date: 05/28/2021
BIOS Revision: 6.0

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SPEC CPU®2017 Floating Point Speed Result

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SPECspeed®2017_fp_base = 110
SPECspeed®2017_fp_peak = 115

Test Date: Jun-2021
Hardware Availability: Jun-2021
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Platform Notes (Continued)
(End of data from sysinfo program)

Compiler Version Notes

C
619.ibm_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
InstalledDir: /opt/AMD/aocc-compiler-3.0.0/bin

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

Fortran
603.bwaves_s(base, peak) 649.fotonik3d_s(base, peak)
654.roms_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

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SPECspeed®2017_fp_base = 110
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Compiler Version Notes (Continued)

Fortran, C

621.wrf_s(base, peak) 627.cam4_s(base, peak)
628.pop2_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

Base Compiler Invocation

C benchmarks:
clang

Fortran benchmarks:
flang

Benchmarks using both Fortran and C:
flang clang

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
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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
- -fveclib=AMDLIBM
- -ffast-math
- -flto
- -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-lcm-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-lcm-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
- -ffast-math
- -Mrecursive
- -mllvm
- -fuse-tile-inner-loop
- -funroll-loops
- -mllvm
- -extra-vectorizer-passes
- -mllvm
- -lsr-in-nested-loop
- -mllvm
- -enable-lcm-vrp
- -mllvm
- -reduce-array-computations=3
- -z muldefs
- -DSPEC_OPENMP
- -fopenmp
- -fopenmp=libomp
- -lomp
- -lamdlibm
- -ljemalloc
- -lflang
- -lflangrti

Benchmarks using both Fortran and C:
- -m64
- -mno-adx
- -mno-sse4a
- -Wl,-mllvm
- -Wl,-enable-X86-prefetching
- -Wl,-mllvm
- -Wl,-enable-lcm-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
- -O3
- -march=znver3
- -fveclib=AMDLIBM
- -ffast-math
- -flto
- -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-lcm-vrp
- -mllvm
- -reduce-array-computations=3
- -Hz,1,0x1
- -Mrecursive
- -mllvm
- -fuse-tile-inner-loop
- -funroll-loops
- -mllvm
- -extra-vectorizer-passes
- -mllvm
- -lsr-in-nested-loop
- -z muldefs
- -DSPEC_OPENMP
- -fopenmp
- -fopenmp=libomp
- -lomp
- -lamdlibm
- -ljemalloc
- -lflang
- -lflangrti

Benchmarks using Fortran, C, and C++:
- -m64
- -mno-adx
- -mno-sse4a
- -std=c++98
- -Wl,-mllvm
- -Wl,-x86-use-vzeroupper=false
- -Wl,-mllvm
- -Wl,-region-vectorize
- -Wl,-mllvm
- -Wl,-function-specialize

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<td>SPECspeed®2017_fp_peak</td>
<td>115</td>
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**CPU2017 License:** 9017  
**Test Date:** Jun-2021  
**Test Sponsor:** Lenovo Global Technology  
**Hardware Availability:** Jun-2021  
**Tested by:** Lenovo Global Technology  
**Software Availability:** Mar-2021

### Base Optimization Flags (Continued)

Benchmarks using Fortran, C, and C++ (continued):

- `-Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6`
- `-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -march=znver3`
- `-fveclib=AMDLIBM -ffast-math -ftlo -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-llicm-vrp -mllvm -reduce-array-computations=3`
- `-mllvm -enable-partial-unswitch -mllvm -unroll-threshold=100`
- `-mllvm -linline-aggressive -mllvm -loop-unswitch-threshold=200000`
- `-mllvm -reroll-loops -mllvm -aggressive-loop-unswitch`
- `-mllvm -extra-vectorizer-passes -mllvm -convert-pow-exp-to-int=false`
- `-Hz,1,0x1 -Mrecursive -mllvm -fuse-tile-inner-loop -funroll-loops`
- `-mllvm -lsr-in-nested-loop -z muldefs -DSPEC_OPENMP -fopenmp`
- `-fopenmp=libomp -lomp -lamdlibm -ljemalloc -lflang -lflangrti`

### Base Other Flags

**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`

### Peak Compiler Invocation

**C benchmarks:**

- `clang`

**Fortran benchmarks:**

- `flang`

**Benchmarks using both Fortran and C:**

- `flang clang`

(Continued on next page)
Peak Compiler Invocation (Continued)

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
-WL, -mlllvm -Wl, -function-specialize
-WL, -mlllvm -Wl, -align-all-nofallthru-blocks=6
-WL, -mlllvm -Wl, -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-llicm-vrp
-mlllvm -reduce-array-computations=3 -DSPEC_OPENMP -fopenmp
-fopenmp=libomp -lomp -lamdlibm -ljemalloc -lflang

638.imagick_s: basepeak = yes

644.nab_s: -m64 -mno-adx -mno-sse4a -Wl, -mlllvm -Wl, -region-vectorize
-Wl, -mlllvm -Wl, -function-specialize -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-llicm-vrp
-mlllvm -reduce-array-computations=3 -DSPEC_OPENMP -fopenmp
-fopenmp=libomp -lomp -lamdlibm -ljemalloc -lflang

Fortran benchmarks:

603.bwaves_s: basepeak = yes

649.fotonik3d_s: basepeak = yes

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

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

Benchmarks using both Fortran and C:
621.wrf_s: basepeak = yes
627.cam4_s: basepeak = yes
628.pop2_s: basepeak = yes

Benchmarks using Fortran, C, and C++:
607.cactuBSSN_s: basepeak = yes

Peak Other Flags

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
http://www.spec.org/cpu2017/flags/Lenovo-Platform-SPECcpu2017-Flags-V1.2-Milan1P-G.html
Lenovo Global Technology
ThinkSystem SR635
3.00 GHz, AMD EPYC 7313P

SPECspeed®2017_fp_base = 110
SPECspeed®2017_fp_peak = 115

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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-Milan1P-0.xml

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