Lenovo Global Technology

ThinkSystem SR655
2.80 GHz, AMD EPYC 7543

**SPEC CPU®2017 Floating Point Speed Result**

**Lenovo Global Technology**

**CPU2017 License:** 9017

**Test Sponsor:** Lenovo Global Technology

**Tested by:** Lenovo Global Technology

**CPU Name:** AMD EPYC 7543

**Max MHz:** 3700

**Nominal:** 2800

**Enabled:** 32 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:** 256 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

**Test Date:** Jun-2021

**Hardware Availability:** Jun-2021

**Software Availability:** Mar-2021

<table>
<thead>
<tr>
<th>Threads</th>
<th>SPECspeed®2017_fp_base = 153</th>
<th>SPECspeed®2017_fp_peak = 158</th>
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</thead>
<tbody>
<tr>
<td>603.bwaves_s</td>
<td>32</td>
<td>376</td>
</tr>
<tr>
<td>607.cactuBSSN_s</td>
<td>32</td>
<td>237</td>
</tr>
<tr>
<td>619.lbm_s</td>
<td>32</td>
<td>70.8</td>
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<tr>
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<tr>
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<td>32</td>
<td>88.4</td>
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<tr>
<td>638.imagick_s</td>
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<tr>
<td>644.nab_s</td>
<td>32</td>
<td>262</td>
</tr>
<tr>
<td>649.fotonik3d_s</td>
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</tr>
<tr>
<td>654.roms_s</td>
<td>32</td>
<td>170</td>
</tr>
</tbody>
</table>

**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 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
## 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>
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<td>186</td>
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<td>186</td>
<td>84.4</td>
<td>187</td>
</tr>
</tbody>
</table>

**SPECspeed®2017_fp_base = 153**  
**SPECspeed®2017_fp_peak = 158**

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>  
'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 = 153
SPECspeed®2017_fp_peak = 158

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/cpu2017-1.1.8-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/
32;"
MALLOCD.CONFIG = "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 = "0-31"

Environment variables set by runcpu during the 621.wrf_s peak run:
GOMP_CPU_AFFINITY = "0-31"

Environment variables set by runcpu during the 644.nab_s peak run:
GOMP_CPU_AFFINITY = "0 32 1 33 2 34 3 35 4 36 5 37 6 38 7 39 8 40 9 41 10 42 11 43 12 44 13 45 14 46 15 47 16 48 17 49 18 50 19 51 20 52 21 53 22 54 23 55 24 56 25 57 26 58 27 59 28 60 29 61 30 62 31 63"

Environment variables set by runcpu during the 654.roms_s peak run:
GOMP_CPU_AFFINITY = "0-31"

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.

(Continued on next page)
General Notes (Continued)

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

Platform Notes

BIOS configuration:
Choose Operating Mode set to Maximum Performance
L1 Stream HW Prefetcher set to Disable
SOC P-states set to P0

Sysinfo program /home/cpu2017-1.1.8-amd-aocc300-milan-B1/bin/sysinfo
Rev: r6622 of 2021-04-07 982a61ec0915b55891ef0e16acafc64d
running on localhost Fri Apr 17 21:17:40 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 7543 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 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 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): 64
On-line CPU(s) list: 0-63
Thread(s) per core: 2
Core(s) per socket: 32
Socket(s): 1
NUMA node(s): 1
Vendor ID: AuthenticAMD
CPU family: 25
Model: 1
Model name: AMD EPYC 7543 32-Core Processor
Stepping: 1

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**Platform Notes (Continued)**

- CPU MHz: 1967.225
- CPU max MHz: 2800.0000
- CPU min MHz: 1500.0000
- BogoMIPS: 5589.51
- Virtualization: AMD-V
- L1d cache: 32K
- L1i cache: 32K
- L2 cache: 512K
- L3 cache: 32768K
- NUMA node0 CPU(s): 0-63
- 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 pdp64 rdtscl rdtsscp
- Virtualization: AMD-V
- Front Side Bus: 66 MHz

/proc/cpuinfo cache data
  cache size: 512 KB

From numactl --hardware
WARNING: a numactl 'node' might or might not correspond to a physical chip.

From /proc/meminfo
  MemTotal: 263779400 kB
  HugePages_Total: 0
  Hugepagesize: 2048 kB
  /sys/devices/system/cpu/cpu*/cpufreq/scaling_governor has performance
  /usr/bin/lsb_release -d

(Continued on next page)
Platform Notes (Continued)

SUSE Linux Enterprise Server 15 SP2

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): Not affected
CVE-2018-3639 (Speculative Store Bypass): Mitigation: Speculative Store
   Bypass disabled via prctl and seccomp
   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):
CVE-2020-0543 (Special Register Buffer Data Sampling): Not affected
CVE-2019-11135 (TSX Asynchronous Abort): Not affected

run-level 3 Apr 17 21:14

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

Filesystem     Type  Size  Used Avail Use% Mounted on
/dev/sdb3      xfs   891G   98G  793G  11% /

From /sys/devices/virtual/dmi/id
Vendor:        Lenovo
Product:       ThinkSystem SR655 -[7Y00000000]-
Product Family: ThinkSystem
Serial:        0123456789
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Platform Notes (Continued)

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

(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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Target: x86_64-unknown-linux-gnu
Thread model: posix

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

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

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
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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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Specspeed®2017_fp_base = 153
Specspeed®2017_fp_peak = 158

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
-fvecclib=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-licm-vrp -mllvm -reduce-array-computations=3 -z muldefs
-DSPEC_OPENMP -fopenmp -fopenmp=libomp -lomp -lamdlibm -ljemalloc
-llang -llangrti

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 -fvecclib=AMDLIBM -ffast-math -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=libomp -lomp -lamdlibm -ljemalloc -llang -llangrti

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

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SPECspeed®2017_fp_base = 153
SPECspeed®2017_fp_peak = 158

Base Optimization Flags (Continued)

Benchmarks using both Fortran and C (continued):
- `-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -march=znver3`
- `-fvecclib=AMDLIBM -ffast-math -fisub -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 -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`
- `-Wl,-mllvm -Wl,-align-all-nofallback-blocks=6`
- `-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -march=znver3`
- `-fvecclib=AMDLIBM -ffast-math -fisub -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`
- `-mllvm -enable-partial-unswitch -mllvm -unroll-threshold=100`
- `-finline-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`
Lenovo Global Technology
ThinkSystem SR655
2.80 GHz, AMD EPYC 7543

CPU2017 License: 9017
Test Sponsor: Lenovo Global Technology
Tested by: Lenovo Global Technology

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
-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 -flto
-fstruct-layout=5 -mllvm -unroll-threshold=50
-fremap-arrays -flv-function-specialization
-mllvm -inline-threshold=1000 -mllvm -enable-gvn-hoist
-mllvm -global-vectorize-slp=true
-mllvm -function-specialize -mllvm -enable-lcm-vrp
-mllvm -reduce-array-computations=3 -DSPEC_OPENMP -fopenmp
-fopenmp=libomp -lomp -landlibm -ljemalloc -lflang

638.imagick_s: basepeak = yes

644.nab_s: -m64 -mno-adx -mno-sse4a -Wl,-mllvm -Wl,-region-vectorize
-Wl,-mllvm -Wl,-function-specialize -Ofast -march=znver3
-fveclib=AMDLIBM -ffast-math -flto -fstruct-layout=5
-mllvm -unroll-threshold=50 -fremap-arrays
-flv-function-specialization -mllvm -inline-threshold=1000
-mllvm -enable-gvn-hoist -mllvm -global-vectorize-slp=true
-mllvm -function-specialize -mllvm -enable-lcm-vrp

(Continued on next page)
Lenovo Global Technology
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SPECspeed®2017_fp_base = 153
SPECspeed®2017_fp_peak = 158

Peak Optimization Flags (Continued)

644.nab_s (continued):
-mlvm -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

654.roms_s: -m64 -mno-adx -mno-sse4a
-W1,-mlvm -W1,-enable-X86-prefetching
-W1,-mlvm -W1,-enable-licm-vrp
-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 -Mrecursive
-mlvm -reduce-array-computations=3
-mlvm -global-vectorize-slp=true -mlvm -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,-mlvm -W1,-enable-X86-prefetching
-W1,-mlvm -W1,-enable-licm-vrp
-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 -flto
-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-licm-vrp
-mlvm -reduce-array-computations=3 -Hz,1,0x1 -O3
-Mrecursive -mlvm -fuse-tile-inner-loop -funroll-loops
-mlvm -extra-vectorizer-passes -mlvm -lsr-in-nested-loop
-DSPEC_OPENMP -fopenmp -fopenmp=libomp -lomp -lamdlibm
-ljemalloc -lflang

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

(Continued on next page)
### Lenovo Global Technology

**ThinkSystem SR655**  
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**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

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### Peak Optimization Flags (Continued)

Benchmarks using Fortran, C, and C++:

607.cactuBSSN_s: basepeak = yes

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### 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

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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  

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-G.xml  

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