Lenovo Global Technology
ThinkSystem SR635
3.70 GHz, AMD EPYC 72F3

SPEC CPU®2017 Integer Speed Result

Lenovo Global Technology

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SPECspeed®2017_int_base = 12.7
SPECspeed®2017_int_energy_base = 118
SPECspeed®2017_int_peak = 12.7
SPECspeed®2017_int_energy_peak = 119

Hardware

CPU Name: AMD EPYC 72F3
Max MHz: 4100
Nominal: 3700
Enabled: 8 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 per core
Other: None
Memory: 256 GB (8 x 32 GB 2Rx8 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 CFE125S 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 balance power and performance

Test Date: May-2021
Hardware Availability: Jun-2021
Software Availability: Mar-2021

Test Sponsor: Lenovo Global Technology
Tested by: Lenovo Global Technology
CPU2017 License: 9017
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600.perlbench_s
602.gcc_s
605.mcf_s
620.omnetpp_s
623.xalancbmk_s
625.x264_s
631.deepsjeng_s
641.leela_s
648.exchange2_s
657.xz_s

Threads

SPECspeed®2017_int_energy_peak = 119
SPECspeed®2017_int_peak = 12.7
SPECspeed®2017_int_energy_base = 118
SPECspeed®2017_int_base = 12.7
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Power

Max. Power (W): 182.43
Idle Power (W): 61.13
Min. Temperature (C): 23.00
Elevation (m): 43
Line Standard: 220 V / 50 Hz / 1 phase / 3 wires
Provisioning: Line-powered

Power Settings

Management FW: Version 4.11 of AMBT23L
Memory Mode: Normal

Power Analyzer

Power Analyzer: WIN:9888
Hardware Vendor: YOKOGAWA, Inc.
Model: C3UD17023E
Input Connection: Default
Metrology Institute: CNAS
Calibration By: GUANG ZHOU GRG METROLOGY & TEST CO.,LTD.
Calibration Label: J202009040176A-0001
Calibration Date: 25-Sep-2020
PTDaemon® Version: 1.9.2 (3976349f; 2020-12-08)
Setup Description: Connected to PSU1
Current Ranges Used: 1A
Voltage Range Used: 300V

Power-Relevant Hardware

Power Supply: 1 x 750 W (non-redundant)
Details: ThinkSystem 750W Platinum Power Supply
7N67A00883
Backplane: 10 x 2.5-inch HDD back plane
Other Storage: None
Storage Model #: 4XB7A10239
NICs Installed: 1 x ThinkSystem Ethernet 4-port Adaptor @ 1 Gb
NICs Enabled (FW/OS): 4 / 1
Other HW Model #: 7 x High Performance fans

Temperature Meter

Temperature Meter: WIN:9889
Hardware Vendor: Digi International, Inc.
Model: DigiWATCHPORT_H
Serial Number: W62330940
Input Connection: USB
PTDaemon Version: 1.9.2 (3976349f; 2020-12-08)
Setup Description: 50 mm in front of SUT main intake

Base Results Table

<table>
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SPECspeed®2017_int_energy_base = 118
SPECspeed®2017_int_peak = 12.7
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Results appear in the order in which they were run. Bold underlined text indicates a median measurement.
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**CPU2017 License:** 9017  
**Test Sponsor:** Lenovo Global Technology  
**Tested by:** Lenovo Global Technology

**Test Date:** May-2021  
**Hardware Availability:** Jun-2021  
**Software Availability:** Mar-2021

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## Peak Results Table

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**Compiler Notes**

The AMD64 AOC Compiler Suite is available at http://developer.amd.com/amd-aocc/

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**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.  
'echo always > /sys/kernel/mm/transparent_hugepage/enabled' and

(Continued on next page)
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Operating System Notes (Continued)

'echo always > /sys/kernel/mm/transparent_hugepage/defrag' run as root to enable Transparent Hugepages (THP) for this run.
'echo madvise > /sys/kernel/mm/transparent_hugepage(enabled' run as root for peak runs of 628.pop2_s and 638.imagick_s to enable THP only on request.

Environment Variables Notes

Environment variables set by runcpu before the start of the run:
GOMP_CPU_AFFINITY = "0-15"
LD_LIBRARY_PATH = 
"/home/cpu2017-1.1.7-amd-aocc300-milan-B1/amd_speed_aocc300_milan_B_lib/64;/home/cpu2017-1.1.7-amd-aocc300-milan-B1/amd_speed_aocc300_milan_B_lib/32;"
MALLOC_CONF = "retain:true"
OMP_DYNAMIC = "false"
OMP_SCHEDULE = "static"
OMP_STACKSIZE = "128M"
OMP_THREAD_LIMIT = "16"

Environment variables set by runcpu during the 602.gcc_s peak run:
GOMP_CPU_AFFINITY = "0"

Environment variables set by runcpu during the 605.mcf_s peak run:
GOMP_CPU_AFFINITY = "0"

Environment variables set by runcpu during the 623.xalancbmk_s peak run:
GOMP_CPU_AFFINITY = "0"

Environment variables set by runcpu during the 625.x264_s peak run:
GOMP_CPU_AFFINITY = "0"

Environment variables set by runcpu during the 641.leela_s peak run:
GOMP_CPU_AFFINITY = "0"

Environment variables set by runcpu during the 648.exchange2_s peak run:
GOMP_CPU_AFFINITY = "0"

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)
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General Notes (Continued)

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

Platform Notes

BIOS settings:
Memory Speed set to Auto
NUMA nodes per socket set to NPS2
SOC P-states set to P3

Sysinfo program /home/cpu2017-1.1.7-amd-aocc300-milan-B1/bin/sysinfo
Rev: r6538 of 2020-09-24 e8664e66d2d7080afeaa89d4b38e2f1c
running on localhost Mon May 24 21:20:01 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 72F3 8-Core Processor
   1 "physical id"s (chips)
   16 "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 : 8
siblings : 16
physical 0: cores 0 1 2 3 4 5 6 7

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):             16
On-line CPU(s) list: 0-15
Thread(s) per core: 2

(Continued on next page)
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Platform Notes (Continued)

Core(s) per socket: 8
Socket(s): 1
NUMA node(s): 2
Vendor ID: AuthenticAMD
CPU family: 25
Model: 1
Model name: AMD EPYC 72F3 8-Core Processor
Stepping: 1
CPU MHz: 1794.476
CPU max MHz: 3700.0000
CPU min MHz: 1500.0000
BogoMIPS: 7386.31
Virtualization: AMD-V
L1d cache: 32K
L1i cache: 32K
L2 cache: 512K
L3 cache: 32768K
NUMA node0 CPU(s): 0-3,8-11
NUMA node1 CPU(s): 4-7,12-15
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
constant_tsc rep_good nopl nonstop_tsc cpuid ext_apicid aperfmperf pni pclmulqdq
monitor ssse3 fma cx16 pcid sse4_1 sse4_2 movbe popcnt aes avx166 fp16
lahf_lm cmp_legacy svm extapic cr8_legacy abm sse4a misalignsse 3nowprefetch osw
ibs skinit wdt tce topoext perfctr_core perfctr_nb bpext perfctr_llc mwaitx cpb
cat_13 cdpl_13 invpcid_single hw_pstate ssbd mba ibrs ibpb stibp vmmcall fsgsb
bsml avx2 smep bmi2 erms invpcid cmq reda arsead adv smap clflushopt clwb sha
xsavemt xsaveopt xsavec xgetbv1 xsavees cmq_llc cmq_occup_llc cmq_mbm_total cmq_mbm_local
clzero irperf xsaverptr wbenoivd ate npt lbrv svm_lock nrip_save tsec_scale
vmcb_clean flushbyasid decodeassists pausefilter pfthreshold v_vmsave_vmload vgif
umip pku ospke vaes vpclmulqdq rdpid overflow_recov succor smca

/proc/cpuinfo cache data

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 8 9 10 11
node 0 size: 128826 MB
node 0 free: 128497 MB
node 1 cpus: 4 5 6 7 12 13 14 15
node 1 size: 128973 MB
node 1 free: 128628 MB
node distances:
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Platform Notes (Continued)

node 0 1
   0: 10 12
   1: 12 10

From /proc/meminfo
   MemTotal: 263986864 kB
   HugePages_Total: 0
   Hugepagesize: 2048 kB

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

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: usercopy/swapgs barriers and __user pointer sanitization
CVE-2017-5753 (Spectre variant 1):
CVE-2017-5715 (Spectre variant 2):
CVE-2020-0543 (Special Register Buffer Data Sampling): Not affected
CVE-2019-11135 (TSX Asynchronous Abort): Not affected

(Continued on next page)
Standard Performance Evaluation Corporation

SPEC CPU®2017 Integer Speed Result

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Lenovo Global Technology
ThinkSystem SR635
3.70 GHz, AMD EPYC 72F3

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

SPECspeed®2017_int_base = 12.7
SPECspeed®2017_int_energy_base = 118
SPECspeed®2017_int_peak = 12.7
SPECspeed®2017_int_energy_peak = 119

Test Date: May-2021
Hardware Availability: Jun-2021
Software Availability: Mar-2021

Platform Notes (Continued)

run-level 3 May 24 21:16

SPEC is set to: /home/cpu2017-1.1.7-amd-aocc300-milan-B1
Specsystem Type Size Used Avail Use% Mounted on
/dev/sda3  xfs  892G  41G  851G 5% /

From /sys/devices/virtual/dmi/id
Vendor: Lenovo
Product: ThinkSystem SR635-[7Y98XXXXXX]-
Product Family: ThinkSystem
Serial: 0123456789

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:
8x Samsung M393A4G43AB3-CWE 32 GB 2 rank 3200
8x Unknown Unknown

BIOS:
  BIOS Vendor: Lenovo
  BIOS Version: CFE125S
  BIOS Date: 05/11/2021
  BIOS Revision: 6.0

(End of data from sysinfo program)

Compiler Version Notes

C
600.perlbench_s(base, peak) 602.gcc_s(base, peak) 605.mcf_s(base, peak) 625.x264_s(base, peak) 657.xz_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++
620.omnetpp_s(base, peak) 623.xalancbmk_s(base, peak) 631.deepsjeng_s(base, peak) 641.leela_s(base, peak)

(Continued on next page)
Lenovo Global Technology
ThinkSystem SR635
3.70 GHz, AMD EPYC 72F3

**Compiler Version Notes (Continued)**

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 | 648.exchange2_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

C++ benchmarks:
clang++

Fortran benchmarks:
flang

**Base Portability Flags**

600.perlbench_s: -DSPEC_LINUX_X64 -DSPEC_LP64
602.gcc_s: -DSPEC_LP64
605.mcf_s: -DSPEC_LP64
620.omnetpp_s: -DSPEC_LP64
623.xalancbmk_s: -DSPEC_LINUX -DSPEC_LP64
625.x264_s: -DSPEC_LP64
631.deepsjeng_s: -DSPEC_LP64
641.leela_s: -DSPEC_LP64
648.exchange2_s: -DSPEC_LP64

(Continued on next page)
Lenovo Global Technology

ThinkSystem SR635
3.70 GHz, AMD EPYC 72F3

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

Base Portability Flags (Continued)

657.xz_s: -DSPEC_LP64

Base Optimization Flags

**C benchmarks:**
- `-m64 -mno-adx -mno-sse4a -Wl,-allow-multiple-definition`
- `-Wl,-mllvm -Wl,-enable-licm-vrp -Wl,-mllvm -Wl,-region-vectorize`
- `-Wl,-mllvm -Wl,-function-specialize`
- `-Wl,-mllvm -Wl,-align-all-nofallthrough-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 -fllvm-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`

**C++ benchmarks:**
- `-m64 -std=c++98 -mno-adx -mno-sse4a`
- `-Wl,-mllvm -Wl,-do-block-reorder=aggressive`
- `-Wl,-mllvm -Wl,-region-vectorize -Wl,-mllvm -Wl,-function-specialize`
- `-Wl,-mllvm -Wl,-align-all-nofallthrough-blocks=6`
- `-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -march=znver3`
- `-fveclib=AMDLIBM -ffast-math -flto -mllvm -enable-partial-unswitch`
- `-mllvm -unroll-threshold=100 -finline-aggressive`
- `-fllvm-function-specialization -mllvm -loop-unswitch-threshold=200000`
- `-mllvm -rerolloops -mllvm -aggressive-loop-unswitch`
- `-mllvm -extra-vectorizer-passes -mllvm -reduce-array-computations=3`
- `-mllvm -global-vectorize-slp=true -mllvm -convert-pow-exp-to-int=false`
- `-z muldefs -mllvm -do-block-reorder=aggressive`
- `-fvirtual-function-elimination -fvisibility=hidden -DSPEC_OPENMP`
- `-fopenmp -fopenmp=libomp -lomp -lamdlibm -ljemalloc -lflang`
- `-lflangrti`

**Fortran benchmarks:**
- `-m64 -mno-adx -mno-sse4a -Wl,-mllvm -Wl,-inline-recursion=4`
- `-Wl,-mllvm -Wl,-isr-in-nested-loop -Wl,-mllvm -Wl,-enable-iv-split`
- `-Wl,-mllvm -Wl,-region-vectorize -Wl,-mllvm -Wl,-function-specialize`
- `-Wl,-mllvm -Wl,-align-all-nofallthrough-blocks=6`
- `-Wl,-mllvm -Wl,-reduce-array-computations=3 -O3 -march=znver3`
- `-fveclib=AMDLIBM -ffast-math -flto -z muldefs`

(Continued on next page)
**SPEC CPU®2017 Integer Speed Result**

Lenovo Global Technology  
ThinkSystem SR635  
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**CPU2017 License:** 9017  
**Test Sponsor:** Lenovo Global Technology  
**Tested by:** Lenovo Global Technology  
**Test Date:** May-2021  
**Hardware Availability:** Jun-2021  
**Software Availability:** Mar-2021

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**Base Optimization Flags (Continued)**

Fortran benchmarks (continued):
- `-mllvm -unroll-aggressive -mllvm -unroll-threshold=150 -DSPEC_OPENMP`  
- `-fopenmp -fopenmp=libomp -lomp -lamdlibm -ljemalloc -lflang`  
- `-lflangrti`

**Base Other Flags**

C benchmarks:
- `-Wno-unused-command-line-argument`  
- `-Wno-return-type`

C++ benchmarks:
- `-Wno-unused-command-line-argument`  
- `-Wno-return-type`

Fortran benchmarks:
- `-Wno-return-type`

---

**Peak Compiler Invocation**

C benchmarks:
- `clang`

C++ benchmarks:
- `clang++`

Fortran benchmarks:
- `flang`

---

**Peak Portability Flags**

Same as Base Portability Flags

---

**Peak Optimization Flags**

C benchmarks:

(Continued on next page)
Lenovo Global Technology
ThinkSystem SR635
3.70 GHz, AMD EPYC 72F3

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

Peak Optimization Flags (Continued)

600.perlbench_s: basepeak = yes

602.gcc_s: -m64 -mno-adx -mno-sse4a -Wl,-allow-multiple-definition
-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 -flto
-fstruct-layout=5 -mllvm -unroll-threshold=50
-fremap-arrays -fllvm-function-specialization
-mllvm -inline-threshold=1000 -mllvm -enable-gvn-hoist
-mllvm -global-vectorize-slp=true
-mllvm -function-specialize -mllvm -enable-licm-vrp
-mllvm -reduce-array-computations=5 -DSPEC_OPENMP -fopenmp
-fopenmp=libomp -lomp -lamdlibm -ljemalloc -lflang

625.x264_s: Same as 602.gcc_s

657.xz_s: basepeak = yes

C++ benchmarks:

620.omnetpp_s: basepeak = yes

623.xalancbmk_s: -m64 -std=c++98 -mno-adx -mno-sse4a
-Wl,-mllvm -Wl,-do-block-reorder=aggressive
-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
-finline-aggressive -mllvm -unroll-threshold=100
-fllvm-function-specialization -mllvm -enable-licm-vrp
-mllvm -reroll-loops -mllvm -aggressive-loop-unswitch
-mllvm -reduce-array-computations=3
-mllvm -global-vectorize-slp=true
-mllvm -do-block-reorder=aggressive
-fvirtual-function-elimination -fvisibility=hidden
-DSPEC_OPENMP -fopenmp -fopenmp=libomp -lomp -lamdlibm
-ljemalloc -lflang

631.deepsjeng_s: basepeak = yes

(Continued on next page)
Lenovo Global Technology
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| SPECspeed®2017_int_base          | 12.7 |
| SPECspeed®2017_int_energy_base  | 118  |
| SPECspeed®2017_int_peak         | 12.7 |
| SPECspeed®2017_int_energy_peak  | 119  |

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**Software Availability:** Mar-2021

### Peak Optimization Flags (Continued)

**641.leela_s:** Same as 623.xalancbmk_s

Fortran benchmarks:
- `-m64 -mno-adx -mno-sse4a -Wl,-mllvm -Wl,-inline-recursion=4`  
- `-Wl,-mllvm -Wl,-lsr-in-nested-loop -Wl,-mllvm -Wl,-enable-iv-split`  
- `-Wl,-mllvm -Wl,-function-specialize`  
- `-Wl,-mllvm -Wl,-align-all-nofallthru-blocks=6`  
- `-Wl,-mllvm -Wl,-reduce-array-computations=3 -03 -march=znver3`  
- `-fveclib=AMDLIBM -ffast-math -flto -mllvm -unroll-aggressive`  
- `-mllvm -unroll-threshold=150 -DSPEC_OPENMP -fopenmp -fopenmp=libomp`  
- `-lomp -llamdlibm -ljemalloc -flang`

### Peak Other Flags

**C benchmarks:**
- `-Wno-unused-command-line-argument -Wno-return-type`

**C++ benchmarks:**
- `-Wno-unused-command-line-argument -Wno-return-type`

**Fortran benchmarks:**
- `-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:

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